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## PREDICTION AND SCIENTIFIC LAW.<sup>1</sup>

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THE first question I want to discuss is this: what difference does it make if we are able to predict? What *practical* difference and what *theoretical* difference? The general answer is clear enough: prediction may help us to control—that is its practical importance; and it tests our hypotheses—that is its theoretical importance. But recent methodologists, I want to suggest, have exaggerated the importance of prediction in both these respects.

### Prediction and Control.

Let us begin from the extreme claim: that when we are able to predict, we must be able to control. Perhaps no one would enunciate this principle in so general a form, but it is quite commonly assumed that *at least within the social sciences* "knowledge is power". Here, to take an example, is J. F. Brown, writing in his *Psychology and the Social Order*: "Undoubtedly if we knew exactly the factors causing men to act as they do, if we knew *social psychology*, a Utopia might be created here on earth" (p. 10, original italics). The objection is obvious—that social psychology might show a Utopia to be impossible. But this objection is ruled out *a priori*, because it is assumed that once we know how human beings act, we must be able to mould them to our heart's desire.

Here there is an apparent contradiction: if when we know how men act we can always make them act differently, then we didn't, after all, know how they act. Thus it is that

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<sup>1</sup> Based upon a paper read to a joint meeting of the Australasian Association of Psychology and Philosophy and the Australian Branch of the British Psychological Society.

precisely the assumption—that prediction implies control—which stirs in Brown such high hopes for social psychology leads Popper's "historicists"<sup>2</sup> to deny the very possibility of social science. "The assumption that the social sciences could ever be so far developed to permit the accurate forecasting of social events, leads to absurd consequences, and it can therefore be refuted on purely logical grounds. For if social calendars of this sort were constructed and became known, they would certainly cause actions which would upset their own predictions. Suppose it were, for instance, predicted that the price of shares would rise for three days and then fall. Plainly everyone connected with the market would sell on the third day, causing a fall of prices on that day, contrary to the prediction. The idea, in short, of an exact and reliable social calendar is self-contradictory: exact social predictions are an impossibility" (I. p. 89).

And the historicist is clearly right, *if we accept his assumption that once we know what is going to happen we can always stop it from happening*. It is only if things go on in their own way in social and personal life that a predictive social science is possible. To predict is to assert that something lies outside our control; even when a prediction helps us to control (which it need not do at all), at the same time it lays it down that something is going to happen whether we like it or not, i.e., it establishes the limits of control. And it limits merely in being a prediction, whereas the help it gives is accidental, in the sense that it depends upon our knowledge and interests at a particular time. Take the predictions:<sup>3</sup>

(a) "There is a typhoon coming."

(b) "Our house will stand up to a typhoon."

Prediction (a) is of practical importance to us if we wish

<sup>2</sup> References to Karl Popper are to his "Poverty of Historicism", Nos. I, II and III (*Economica*, N.S., Vol. XI, Nos. 42-4).

What he means by an historicist, at least at this stage of his argument, is a person who holds that "the historical character of social laws makes it impossible to apply the majority of the methods of physics to sociology" (I. p. 87).

<sup>3</sup> There is no logical basis for Popper's distinction (I. p. 99) between "prophecies" and "technological predictions", which I may here appear to be ignoring. What he gives as an example of a "technological prediction"—"for a shelter to stand up to a typhoon, it must be constructed in a certain way"—is not a prediction at all, though it may be used as a *rule* in the course of making predictions. And the whole distinction rests on this failure properly to consider what is meant by a "prediction".



to avoid certain of the possible consequences of typhoons. It presents us with a practical problem and, faced with a problem, we invoke rules. We know, perhaps, that "if a house is made of concrete, it stands up to typhoons". With the help of that rule, we are led to prediction (b) which removes our anxiety. In each case, what the prediction itself does is to assert that something *will* happen; it assists us to control only in so far as what is going to happen suits our purposes. (That "our house will stand up" pleases us; but, of course, it may displease our enemies.) And we are able to control only because we know what is going to happen.

On the assumption which Brown shares with the historicists, neither prediction nor control of human behaviour would be possible. For, by hypothesis, our efforts to control would be subject to the arbitrary intervention of other "controllers" and our predictions could always be falsified by someone else's (or our own) fiat. But there is not the slightest reason for supposing that there is in fact this arbitrariness within the social field. It is perfectly true that when a person thinks that something is going to happen, this may lead him to act in a particular way; and possible that as a result what he thought was going to happen (and tried to prepare for) will not happen at all. This is only to say that our actions may have social consequences; from which it certainly does not follow that there are no causal connections in the social field. Thus in the stock-exchange example by which the historicist supports his case, he assumes that very possibility of prediction which he is questioning; he assumes that if people believe shares will fluctuate in a certain manner, they will react in specifiable ways ("will sell on the third day"). This is inevitably so; to maintain that what people believe influences their social conduct is to affirm, not to deny, the existence of social regularities and, hence, the possibility of social predictions.

The difficulties which flow from the view that prediction implies control are sometimes concealed from the social scientist because he thinks of his own procedures as lying outside the social field, and hence as not being subject to his

generalisations. He is the controller (cf. Bentham's "legislator"), and therefore is not himself liable to be controlled. But, of course, this is a mere illusion of omnipotence. Nothing so angers the social scientist as an inquiry into the social character of his own activities; he seems to feel that it is his personal integrity which is being attacked. But the fact remains that intervention is a social phenomenon; and if there is a general law that nothing in the social sphere lies outside of human control, then this applies as much to social interventions as to any other social activity.

Similar considerations can be urged against the more mitigated "control" theory that even if not every sort of human action can be brought under control by the social scientist, still it is the controllable sorts which are alone of interest to him. Or at least (when some concessions are made to "pure theory") that only the controllable is of any interest to the "practical" or "clinical" social scientist. "The clinician", says Isidor Chein, "is not primarily concerned with *prediction* but with *control*. He is not content with anticipating what will happen if he does nothing; he wants to know what will happen in view of what he does or in view of his recommendations being followed . . . That there have always been wars is, for the clinician, beside the point; he wants to know how to *stop* wars". Similarly, Watson thinks it is the object of psychology "to achieve the formulation of laws and principles whereby man's actions can be controlled by organised society".<sup>4</sup>

Thus theories are regarded as "unpractical", or even "defeatist", if they apparently set limits to manipulation; the only propositions which arouse any interest are of the form: "If (or unless) social scientists intervene, P will develop in the manner Q". But, of course, even this hypothesis is "defeatist"—it asserts that P will develop in the manner Q, if we intervene, whereas the scientist may have wanted it to behave in the manner R. If it were not "defeatist", it would be of no help whatsoever in prediction, or in control.

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<sup>4</sup> For Chein, see *Psychological Review*, Vol. 52, No. 3; for Watson, see *Psychology from the Standpoint of a Behaviourist*, ed. 1, p. 2.



A "practical" proposition, in fact, is one which makes some reference to social scientists, which enables us to make predictions about the consequences of *their* activities. And the effect of concentrating upon this particular sort of theory—the theory of social intervention—is to draw attention away from the basic issues of the social sciences into that realm, of minor importance, in which the social scientist can make effective interventions. The result is a quite unrealistic appraisal of the importance of the social scientist in society; the real alternatives are not a "practical" or an "academic" approach, but bad theory or good theory.

This criticism might be regarded as merely question-begging. How is it possible to show that the theory of intervention avoids "basic" issues? Is not the very point at issue being assumed? Are we not merely *recommending* that the social scientist study certain questions rather than others?

But the matter goes deeper than that: the theory of social intervention is secondary in the sense that it depends upon a prior theory of *what will happen if we do not intervene*. Unless we know things happen now, which means unless we have a social theory, we are in no position to predict the consequences of our intervention. Unless the clinician is to fall back (as some do) upon "intuition" (that is, unless he abandons *science* altogether), his clinical practice will depend upon the development of general social theory.

Of course, it is also true that clinical practice may *assist* the development of theory. The desire to control is an important factor in the development of scientific theory. But unless it stimulates "wonder" (in Aristotle's sense) the desire to control leads to an insistence upon a policy of immediate returns which is fatal both to competent practice and to the development of theory.

To sum up:

(a) the view that what we can predict we must also be able to stop from happening leads to contradictions;

(b) whether a prediction helps us to control depends upon our knowledge and interest;

(c) the prediction taken by itself asserts that something is going to happen whether we like it or not, i.e., that something lies outside our control;

(d) the social sciences are concerned to discover what in fact happens. They will be interested in "intervention" as one type of social phenomenon but cannot, by the nature of the case, restrict their concern to this particular form of social action. And, so far as they try to do so, they are led into a false conception of the importance of the social scientist.

### Prediction and Theory.

A prediction, we said, is of theoretical importance in so far as it tests a hypothesis. That a prediction has been successful is a fact of no theoretical importance; nor is the fact that a particular person (with "intuition") regularly makes successful predictions. The predictions which matter are those which confirm or falsify a theory.

From the point of view of logical analysis, a prediction is simply a *logical consequence*; something which must be the case if a certain hypothesis is true, provided that some other proposition with which it is conjoined is also true. (Thus there must be a typhoon coming if the hypothesis is correct that when the atmospheric pressure falls below 28 there is always a typhoon and if at present the pressure is below 28.) And the logical significance of formal consequences which refer to future events is no greater than the significance of consequences which refer to past events. If the hypothesis is that there is a regular trade-cycle then the failure (or success, of that theory in predicting the 1949 depression is of precisely the same significance as its failure (or success) in accounting for the 1893 depression. It is our practical interests—the past is what we can't do anything about—and, along with that, a relic of the superstition that to predict the future is magic, which lead us to attach so much weight to prediction.

To put the point generally, if our hypothesis is confirmed in  $n$  instances, then its further confirmation through prediction (so that it is now confirmed in  $n + 1$  instances) is of no



greater significance than the recollection of another past instance to which it also applies. If the success of a prediction has some special significance, this is because it has a peculiar formal relation to the hypothesis, a relation which a past instance might equally possess.

This can be illustrated by the following example.<sup>5</sup> Let us suppose that a teacher is writing a mathematical series on a blackboard. He writes the numbers 3, 9 and is then interrupted. We try to predict what the next number will be. The hypotheses which occur to us are:

(a) that the series is an arithmetical one, with a difference of 6;

(b) that the series consists of the powers of three.

Suppose we adopt the first hypothesis. Then if the teacher writes 15 as the next number our hypothesis is confirmed and the second hypothesis disproved. Thus the success of our prediction is so far decisive, that it rules out what James calls a "living option".

But this is a specially selected example, in which the next step is the crucial one. Suppose the teacher had written

3, 9, 15, 21, 27

before he was interrupted. Then the success of our prediction that the next number will be 33 is of no special significance; the crucial point lies in the past. And there is no reason to suppose that the next confirmation will *ordinarily* be of any peculiar significance.

The position is complicated when (as in Cohen and Nagel's *Logic and Scientific Method*) knowledge of the past is identified with observation and knowledge of the future with experiment; the importance of prediction is then identified with the importance of experiment. But even if the distinction between observation and experiment has the significance ordinarily attached to it, it needs to be remembered that experiments often precede the hypothesis which explains them; this happening, for example, when they falsify the hypothesis

<sup>5</sup> Suggested by the one used in Cohen and Nagel, *Logic and Scientific Method* (Bk 2, ch. 11, §3) to show that the value of a hypothesis is to be estimated in terms of its predictive efficacy.

they were constructed to confirm (cf. the Michelson-Morley experiment).

It can be granted, however, that prediction is a very important method of confirmation, even if we insist that it is not the only method of testing a hypothesis. For one thing, the tautological character of pseudo-hypotheses can most easily be brought out by drawing attention to their uselessness **as a basis of prediction**. Psychological hedonism, for example, is quite incapable of helping us to determine how a human being will act at a choice-point; any action is equally compatible with the hypothesis (and the same could be said of certain recent theories of drives). Even in this case, of course, the same point could be made with reference to past actions; but a theory often has an after-the-event plausibility which disappears when we try to use it as a predictive rule. To take another case, the connection asserted in our hypothesis may never have been noticed in the past, or its presence may have been commented upon in some cases and not in others, without its having been positively denied to exist in those other cases. Thus it may be only after the hypothesis has been formulated that we are in any position to judge whether it is confirmed or falsified in experience. But, on the other hand, where there is any possibility that the hypothesis may itself give rise to its "confirmations" (as the Freudian hypotheses and certain medical hypotheses are alleged to do, by suggestion), confirmations from the *past* have a special significance. And certainly the anxiety to predict, and the under-estimation of studies of the past, which is characteristic of much current methodological writing derives not at all from theoretical considerations, but solely from a narrow-visioned practicalism.

### **Scientific Law.**

By keeping in mind this general point—that the practicalism of the social sciences is a recurrent source of methodological confusion—it is possible to understand much that is otherwise incomprehensible in certain recent discussions of the logic of prediction, discussions in which the main partici-



pants have been psychologists turned methodologists. Three views have emerged:

(a) A scientific law is an assertion that certain observations have been made in the past. Hence it does not entitle us to predict the future.

(b) A scientific law is statistical in character. Hence it does not entitle us to predict that anything *will* happen in the future, but only that its happening has such-and-such a probability.

(c) A scientific law admits of no exceptions. Hence it must make possible the prediction of what will happen in particular concrete situations.

I propose to discuss each of these views in turn and, with some reservations, to support the third.

(a) *Are Laws about the Past?*

"Attempts on the part of science to make predictions", writes Pratt, "involve a contradiction. The only indubitable facts are those contained in the original protocols or observations. At the time *t*, under conditions *c*, events *e* were recorded . . . A future event does not exist and cannot be known by direct observation. Therefore, all propositions about the future, whether made by science or any other system of observation are neither true nor false."<sup>6</sup>

This refurbished scepticism depends, like its many predecessors, upon an identification of true with known to be true, and of known to be true with indubitable. It takes its departure from a Cartesian ideal, which it supposes to be realised in protocol statements and nowhere else, viz., the ideal of incorrigibility.

But the belief in the incorrigibility of "protocol statements" rests on their identification with "observations", and on the equivocal character of the latter word. If an "observation" means a statement of what has *in fact* happened, then no doubt it is incorrigible; but so is a "prediction" if that

<sup>6</sup> C. C. Pratt, *The Logic of Modern Psychology*, 1939, p. 155.

Pratt is clearly under the influence of one of the earlier versions of logical positivism (approximately 1933 vintage). See pp. 80-84 of my *Logical Positivism* I (this Journal. Vol. XXI, Nos. 2 and 3) for comment on the theory of "protocol statements".

means a statement of what *in fact* is going to happen. But if, and this is actually the position of "protocol statements", an observation means an *assertion* that something has happened then it is no more incorrigible than the assertion that something is going to happen; in either case, whether it is a matter of predicting the future or of observing the present, the risk of error remains. Thus the supposed ideal form of truth, in comparison with which predictions are imperfect, turns out to be a rationalist myth.

And a scientific law makes no reference whatever to time *t* or to conditions *c*; this reference is imported by Pratt into the discussion to create, quite artificially, the alleged contradiction. It is true enough that if scientific laws are simply statements about the past, then there is no way of using them to predict the future. But the fact is that they *can* be used to predict, which is sufficient to show that they are not summaries of past observations. A law is no more "about the past" than it is "about the future"; the distinction between past and future is irrelevant to its truth or falsity. What it asserts is that a general connection holds between two kinds of things. It may be false, but true or false this is what it asserts. On any other view, it is quite impossible to understand how scientific laws come to be used as they are.

(b) *Are Scientific Laws Statistical Statements?*

Pratt himself goes on to mitigate the severity of his first formulation, and in a way which links his position closely with that of a number of other psychologist-methodologists. "Truth and falsity in relation to predictions", he says, "are limiting cases on a scale of probability. There is no such thing as absolute truth. It is permissible to say that a proposition is true only if the statement is understood to mean that the probability of its failure to come true is so small as to be practically negligible" (pp. 156-7).

Here one notices an implicit assumption: the assumption that statistical propositions are *sui generis*, being exceptions



to any generalisation about truth. For otherwise, the untenability of Pratt's position ought to be obvious; he is saying simultaneously that nothing is absolutely true and that something is absolutely true, viz., "that the probability of a certain prediction's failure to come true is so small as to be practically negligible". It can be known what is probable and what is improbable, it can be known what is practically negligible and what is practically important—but nothing else can be known. That is the astonishing assumption which persists throughout the writings of the statistical methodologists, reaching perhaps its highest peak in the serious discussion whether knowledge can ever be more than .95 accurate!"

Let us, then, raise the question: what exactly is the status of statistical propositions? At first sight, we are inclined to regard them as particular propositions, arguing that "72% of University students are novel-readers" is only a more exact way of saying that "some University students are novel-readers". But this will not do, for various reasons.<sup>7</sup>

(a) A particular (or "existential") proposition can be established by examination of a single instance. But no single instance can establish that 72% of University students are novel-readers.

(b) A particular proposition can only be disproved by a universal proposition. But the statistical proposition can also be disproved by showing that, for example, only 30% of University students are novel-readers.

(c) A particular proposition cannot be used as a rule in predicting: it makes no promises about the future. But a statistical proposition, however obscurely, does make certain promises.

Yet what precisely are we promised by a statement of the form: 72% of M are N? Certainly, this does not imply that

<sup>7</sup> Sarbin, *The Logic of Prediction in Psychology* (*Psychological Review*, Vol. 51, 1944, No. 4, p. 222).

<sup>8</sup> These same considerations apply to other forms of the statistical proposition, e.g., the correlation statement.

any M we care to take will be N. Nor does it imply that in any group of M's we select, 72% will be N. Neither the discovery of a single University student who does not read novels, nor the discovery that of a hundred Sydney University students only 30% read novels would ordinarily be taken to falsify the hypothesis that 72% of University students are novel-readers. Does this mean that nothing whatever can falsify the hypothesis? That is the conclusion accepted, to take one example of many, by Ernest Nagel in his *Principles of the Theory of Probability*. But although Nagel observes that "no direct statistical evidence obtainable from actual trials can establish or refute a probability statement" (p. 52), he takes this to imply only that "we have no final assurance that a hypothesis as to the numerical value of a probability is a correct one" (p. 57) or, as he has put it earlier, that a probability statement must remain a hypothesis (p. 24).

What he does not observe, however, is that on this showing a probability statement *could not even be confirmed*, and that if it can be confirmed, it can also be falsified. For to say that the hypothesis could be confirmed is to say that there is a proposition p which must be true if the hypothesis is true; and if this is the case the hypothesis must be false if p is *not* true. Thus, on Nagel's showing, a probability statement could not be tested in any way whatsoever. In other words, one statistical hypothesis would be as good as another—and likewise as useless for any scientific purpose.

If, then, a statistical hypothesis is to be of any theoretical standing or of any practical use, it must commit us to certain consequences, to specific predictions, and this means that it must be universal in form, perhaps something like the following:

"In all groups of a magnitude greater than S, which are constructed in the manner X, the percentage of P who are Q will not differ from R by more than an amount D."

This formulation, of course, still bristles with difficulties. It is necessary to make some reference to the manner in which



the group is constructed, since it would be possible to construct the group in such a way that it contained only those P which are not Q, and yet it is very hard, and perhaps impossible,<sup>9</sup> to indicate exactly what that method must be. And although it is in terms of our experience of the kinds of variations which occur in groups that we fix the value of S and D, the fact remains that in the end our decision is an arbitrary one.

But at least a formulation of this kind does permit of confirmation, and along with that, of falsification. This is not the case with what might appear a promising alternative, the formulation by means of the conception of a limit: roughly

“As the magnitude of the group approaches a limit, the percentage of P who are Q approaches R.”

At least, if we take this to be confirmable then it will be falsified by the discovery that a group of P's of magnitude M actually contains R Q's, whereas a larger group  $M_1$  contains  $R-x$  Q's—and this is exactly what we do find, say, in successive throws of a penny. The position is not at all comparable to that which arises, e.g., if we regard the “real size” of a rigid body as the limit which its measurements approach;<sup>10</sup> in this case we can produce evidence that the real size is S, the evidence being the fact that more refined methods of measurement bring us closer to S, but it is not true that better measuring methods, or an increasingly large number of tries, brings us closer to the “real proportion” of Q in P.

But the more immediately relevant points are the following:

(a) We do not by substituting statistical statements for universal propositions of the ordinary sort avoid the traditional “problem of induction”; on the contrary, we accentuate difficulties of this kind. A realisation of this fact removes much of the gilt from the statistical gingerbread.

(b) There is at least as much risk of error in statistical as in any other statements. It sometimes seems to be

<sup>9</sup> cf. G. H. von Wright on “randomness” (On Probability, *Mind*, Vol. 49, 1940, No. 195).

<sup>10</sup> cf. Freudenthal, Is there a Specific Problem of Application for Probability? (*Mind*, Vol. 50, 1941, No. 200).

assumed that statistical statements must have a superior sort of certainty merely because they are mathematical in form; Sarbin speaks of probability statements as being "capable of logical demonstration". But whatever view we take about the certainty of the calculus of probability, the application of that calculus implies that we are already acquainted with certain statistical propositions—and these are certainly not "capable of logical demonstration". As well say that "there are 30 people in this room" is "more certain" than "all the people in this room are mortal" on the ground that 30 is a mathematical conception.

(c) Statistical statements are a very imperfect scientific instrument, because it is not at all clear what facts would be sufficient to establish or to falsify them. They combine an appearance of great accuracy with an actual vagueness of application.

If a statistical statement has the form we suggested, if, at least, it is a statement about all groups of a certain magnitude, then it will follow that such propositions do not entitle us to predict anything whatsoever about either

(a) individual cases, or

(b) groups of less than the assigned magnitude.

This, however, the statistician would wish to deny; he would assert that although we cannot predict from our knowledge that the correlation between scores in test  $T_1$  and test  $T_2$  is +.63 how an individual A who has made a certain score in  $T_1$  will score in  $T_2$ , nor even what will be the average score in  $T_2$  of ten persons whose average score in  $T_1$  is S, we can at least predict this much—that A has a certain *chance* of making a particular score in  $T_2$ , and similarly that there is a certain probability that the average score of the ten persons in  $T_2$  will stand in a particular relation to S.

The method employed is that of so-called "probable deduction", exemplified in C. S. Peirce's<sup>11</sup> "simple probable deduction":

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<sup>11</sup> Collected Papers, II, 695.



The proportion  $p$  of the  $M$ 's are  $P$ 's  
 $S$  is an  $M$

∴ It follows, with probability  $p$ , that  $S$  is a  $P$ .

It is against the use of "deductions" of this sort that F. W. Allport has protested. "Suppose", he says, "that we set out to discover the chances of John Brown to make good on parole and use for the purpose an index of prediction based upon parole violations and parole successes of men with similar histories. We find that 72% of the men with John's antecedents make good, and many of us conclude that John, therefore, has a 72% chance of making good. There is an obvious error here. The fact that 72% of men having the same antecedent record as John will make good is merely an actuarial statement. It tells us nothing about John. If we knew John sufficiently well, we might say not that he had a 72% chance of making good but that he, as an individual, was almost certain to succeed or else to fail."<sup>12</sup>

Now, to objections of this sort Peirce would reply that "the conclusion must be drawn in advance of any knowledge on the subject"; and he illustrates his point in the following way: "A card being chosen at random from a picquet pack, the chance is one-eighth that it is an ace, if we have no other knowledge of it. But after we have looked at the card, we can no longer reason that way" (II, 696).

And it is inevitable, if we are to make any sense at all of the statistical syllogism, that we should adopt this conclusion. For it is clear that by taking the same  $S$  in relation to a number of different classes we would obtain quite different statements of the probability of  $S$  being  $P$ ; and that all the time we may be able to prove syllogistically that it is not a  $P$  at all.

Yet this means that "statistical deduction" is a very peculiar sort of argument indeed. For by using different propositions (all true) as the major premise and retaining the same minor premise, we can arrive at what appear to be quite incompatible conclusions:

<sup>12</sup> The Psychologist's Frame of Reference, *Psych. Bull.* 37, 16-17, 1940, quoted Horst, *The Prediction of Personal Adjustment*, p. 26.

S is a P with probability p,

S is a P with probability q, etc.,

each of them being incompatible, on the face of it, with

S is not a P

even though the premises necessary to prove it is not a P are not at all incompatible with the premises necessary to prove that it is a P with probability p or with probability q. And it is very hard to make out how, if the original deduction was a valid one, the mere discovery of further information about S (not the discovery that we were mistaken, but simply the discovery of additional facts) could affect the truth of the original conclusion.

The only way of avoiding this difficulty is to maintain that the conclusion "S is P, with probability p" is an elliptical one. But what precisely is the fuller formulation? One view<sup>13</sup> could be put somewhat in this form: that when we say S is a P with probability p we always mean *in relation to certain evidence*, i.e., that this statement only has sense as the conclusion of a statistical syllogism. But this would imply that the probability statement is not really the conclusion at all but *the whole argument*; that S is P with a probability p is an elliptical way of saying that "In relation to the fact that the proportion p of the M's are P's and S is an M, S is a P has a probability p". And what it means to say that it has this probability "in relation to" the facts remains a problem; we soon find ourselves in the Keynesian realm of unanalysable relations which have to be intuitively apprehended, i.e., in mysticism.

We can, in fact, only make sense of this doctrine if we accept some form of the frequency theory of probability. "Statements of probability predicate something of an individual only in so far as he is an element in a specified reference class. Probability statements which do not do so *explicitly* must be regarded as incomplete if they are to be significant: they must be understood as making an implicit

<sup>13</sup> See D. Williams's contribution to the Symposium on Probability in *Philosophy and Phenomenological Research*, Vol. VI, No. 1. This symposium and its predecessor in the same Journal, Vol. V, No. 4, open up the main issues in a particularly thorough fashion.



specification of the reference class within which the designated property occurs with a certain relative frequency" (Nagel, *op. cit.*, p. 23).

But what this means is that the statistical syllogism is really of the form:

The proportion  $p$  of the M's are P's  
S is an M

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∴ S is a member of a group in which the proportion  $p$  are P's.

And this is, as Allport says, "an actuarial statement"; it is not a prediction about S, but a statement that S belongs to a class with certain actuarial properties. As far as prediction goes, we have only two possibilities—we must either predict that S is a P or predict that it is not a P; it makes no sense to say that we predict "it has a chance of being a P". What we can say is that if we predict it is P, we have a chance of being right; but all this means is that it is a member of a class of which a certain proportion are P, and we do not know it to be a member of any class of which none are P.

The "practical usefulness" of such statements remains; their use is, as we argued, that they enable us to make predictions about all groups of a certain magnitude—and this is all we need to do in actuarial work. We want to be certain that we will not lose money in the long run (how long a run depends upon our financial resources) if we adopt a particular policy. But the fact remains that when we predict what will happen in a particular case, or in a small group of cases, we are *guessing*. Certainly we are in a better position than if we did not know the actuarial statement, because once we know that the proportion  $p$  of the M's are P's then at least we have falsified the hypothesis that no M are P. And, of course, we may find that the proportion  $p$  appears even when the group of M is very small; which will enable us to acquire a considerable reputation as a prophet, if the value of  $p$  is high. (It is impossible, as I said before, to put these considerations in a quite accurate way; "high" and "small" are, of course, relative terms.)

There are very many ways, in fact, in which a statistical statement can be of practical use; and, of course, a statistical statement can also be of theoretical importance—either in itself or as confirming, falsifying, or suggesting a hypothesis. I am objecting, not to the use of statistical statements but

- (a) to the suggestion that somehow these are “better” or “more scientific” than universal propositions,
- (b) to the suggestion that they enable us to predict what will happen in individual cases.

And I would also maintain that the current popularity of statistical procedures amongst psychologists arises from the tendency to regard psychology, not as a science, but as a *technique of administration*, concerned only to make actuarial predictions about large groups.

The usual retort of the statistician to criticisms of this kind (which have come most freely from the followers of Lewin) takes the following form; he objects that a scientific ideal is being set up, an ideal of unrestricted generality, which in fact can never be realised. More specifically: all knowledge, he says, is statistical and approximate. Some of the more general objections to this view we have already considered, but it is worth while asking ourselves why it has so particularly recommended itself to psychologists.

In support of his contention that psychological laws are bound to be of an imperfect and approximate character, Sarbin appeals to the “principle of indeterminacy”. For this, he has been attacked by I. D. London,<sup>14</sup> on the ground that the Heisenberg principle refers only to atomic processes, and hence cannot be applied to the macroscopic situations studied in psychology. But Sarbin is not arguing that “the principle of indeterminacy” is a general principle which must hold in psychology because it holds everywhere: his argument is rather that in psychology as in atomic physics the presence of the measuring-rod itself affects the situation being measured (and, of course, to an extent which cannot itself be measured).

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<sup>14</sup> Psychology and Heisenberg's Principle of Indeterminacy (*Psych. Rev.*, Vol. 52, No. 3).

He takes the special case of a clinical interview. The interviewer functions as a measuring-rod. But if, for example, the person interviewed happens to identify the clinician with his father, that will influence the character of his responses and hence the measurement which is made. The situation can only be measured by introducing a measuring-rod, but as soon as the measuring-rod is introduced a *different* situation is set up from the one which we set out to measure.

This difficulty is a real one, but it does nothing to show that all our knowledge is approximate. In fact, even to state the problem, we have to assume that there are various things which we know quite well: that the clinical situation has a certain kind of effect on the person interviewed, that there is such a process as identification, and so on. All that Sarbin can be said to show is that results obtained by the method of clinical interview are very likely to be misleading. This is a useful piece of information but we accept it with equanimity (and go on to the further study of the clinical interview as a psychological situation) provided that the clinical interview is not the only way of acquiring psychological information and *that* one must assume, even in order to recognise the limitations of the interview method.

Much of the plausibility of Sarbin's position (as Chein, *op. cit.*, points out) depends on the ambiguity of "all knowledge is approximate". What Sarbin really wants to show is that every true proposition is statistical in form; all that he does anything to prove is that we cannot exclude the risk of error—a consideration, of course, which applies as much to statistical as to any other propositions.

One main source of the psychologist's insistence that "knowledge is approximate" is his desire to be thought "scientific" even when it is abundantly clear that the sort of problem he tackles is not of the kind which is likely to be theoretically fruitful, and that the sort of solution with which he is content does not permit the prediction of individual cases. Take, for example, the predictions Horst<sup>15</sup> wants to be able to make:

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<sup>15</sup> Introduction, p. 4.



How is it possible to predict whether a person on parole will commit a crime?

How is it possible to predict whether a person will be successful in business?

and the procedure he advocates:

- (a) Indices of success in the given activity are selected (e.g., "promotion" would be an index of success in business).
- (b) Items are sought out which are significantly related to "success" (e.g., "father's occupation").
- (c) These predictive items are combined to give a total prediction score for each individual which can be related to his index of success.
- (d) The selected items are then tried out on at least one check sample of individuals other than the original group, and the stability of the relation of prediction and criterion scores checked. (Horst finds it necessary to complain that this step is often omitted!)
- (e) The test is then ready for application to the general population.

The deficiencies of this method should be obvious; Horst himself gives an admirably clear account of them. In the first place, "commercial success" and "crime" can only be defined arbitrarily, in terms of the conventions of a particular period. What we are trying to predict is not whether a certain type of behaviour will be manifested, but whether the person will conform to highly variable standards: we should need to know not merely with what kind of persons we are concerned but also what social changes are going to take place before we could expect to be able to make accurate predictions. In other words, we should need to pass right outside the field with which the test-predictor normally concerns himself.

In the second place, the very qualities which make for "commercial success" at one period and place make for "commercial failure" at another; the sort of person who is successful under boom conditions may fail under depression

conditions, the sort of person who is successful in America may be unsuccessful in China. In other words, the correlations discovered by stage (b) are what Lewin calls "historico-geographic". Now, this would not matter if the historico-geographic limitations were themselves made a subject for study; if, that is, it were clearly understood that what is being predicted is not "commercial success" but whether a certain kind of person will obtain certain prizes under particular economic and social conditions. But that again would imply careful sociological analysis of a kind the tester does not undertake. What, instead, he attempts to do is to overcome this particular difficulty by "standardising" the tests under different conditions. But how is he to know when such a re-examination of the predictive items is necessary? The obscurity which attaches to statistical propositions, the difficulty of knowing exactly under what conditions such a proposition would be proved to be false, means that a test can be continued in use long after the conditions under which it is useful are no longer present. A "standardisation" which consists merely in repeating under new conditions stages (b), (c), (d), still retains the historico-geographic limitations of the original statement, and still suffers from the same obscurity.

Thirdly, whether a person is "commercially successful" or "commits a crime" will depend very considerably on the circumstances he encounters, the opportunities which open out before him or the social and economic problems which beset him. These circumstances the tester does not even attempt to predict; and to do so he would have to move outside the arena of tests. In short, the test procedure is quite incapable of predicting what will happen in a given case—it is an accident if it is right—and it can predict what will happen in a certain number of cases only if the persons tested continue to live under conditions not varying substantially from those prevailing when the tests were standardised.

These criticisms, I said, are sufficiently obvious, but they do not particularly perturb the tester. His concern is with

this question only: is the use of these tests profitable? Here is a revealing passage from Horst:

"An important problem in the prediction of human behaviour which must be considered, is how much time, energy and money we are justified in expending on the development and operation of a prediction procedure . . . For example, in order to know how much time and money should be expended on testing, investigating, and interviewing an applicant for a sales position, the approximate cost to the company of a man who must be discharged at the end of a year or two because of incompetency should be known" (p. 49).

This is scarcely the atmosphere in which science is likely to flourish. Cheapness is more important than accuracy. But the deficiencies of such methods as these should not lead us to the conclusion that "all knowledge is approximate"—that conclusion by means of which the tester squares his scientific conscience.

The present situation in psychological prediction is similar to that which would have arisen in meteorology, if the meteorologist had adopted the psychologist's method:

- (a) Begin by establishing criteria of "good weather".
- (b) Seek out people who are particularly good at predicting good weather and ask them to state the methods on which they rely.
- (c) Combine these methods into a single predictive test, using the rule that whenever an item increases the efficacy of the test, it is to be included.
- (d) Use these items to predict in an individual case, i.e., find out how Smith's rheumatism is going along, examine the salt-cellars and ring up Mrs. Brown about her corns.

It is not at all impossible that the meteorologist would then predict successfully in more cases than he does now. But his methods would be historico-geographically tied; they might not work at all in other places or in other meteorological periods. He would be retaining a distinction between "good weather" and "bad weather", which is bound to be itself an



obscure and variable one and which has no theoretical, but only a conventional, significance. He would have learnt nothing at all about "cold-fronts" and "pressure-systems"; in other words, there would be no meteorological science. And he would not have the slightest prospect of ever being able to predict the weather with, say, the accuracy of the astronomer's prediction of heavenly movements.

Impatience to predict is ruinous to any science; it gives rise inevitably to a philosophy of "good enough". And worse than that is the spirit it betrays, the subservience to "urgent needs", i.e., in practice, the demands of the established social order. Nowhere more than in the social sciences is this impatience manifested; and nowhere is prediction employed with less regard for its *scientific* significance.

(c) *Can the Individual Case be Predicted?*

The current practicalism of psychology is not without its critics. Pratt, for instance, emphasises that "psychologists need more than any other group of scientists the protection of cloisters, an atmosphere of detachment and leisure" and again that "to insist upon quick returns might steer research away from a course which would eventually yield far more important and practical applications than anything supplied by the pressure of a narrower utilitarian demand" (op. cit., pp. 179, 176). But Pratt, as we saw, succumbs to the methodological assumption of the tester that there is some peculiar virtue in statistical propositions.

A much more thorough-going attack on contemporary statistical psychology is contained in Kurt Lewin's *The Conflict Between Aristotelian and Galileian Modes of Thought in Contemporary Psychology*.<sup>16</sup> Lewin argues that statistical psychology is Aristotelian in character. It first of all sets up a class, usually defined in historico-geographic terms—"primary school children in the Sydney metropolitan area", "the three-years-old child". It then asks what kind of behaviour is most frequently found in that class. Such behaviour it calls "typical", and it predicts the behaviour of

<sup>16</sup> *Journal of General Psychology*, Vol. 5, pp. 141-177; reprinted in his *Dynamic Theory of Personality*.

individual members of the class by assuming that they will behave in a typical manner. Modern psychology, it is true, is unlike Aristotelian physics in the free use it makes of mathematics. But this is a point of no fundamental importance; Aristotelian physics could have been mathematised in a statistical manner without its structure being at all seriously affected. The crucial point is the identification of the lawful with the frequent or the "typical". This is the primitive mode of thinking, and science remains semi-primitive until it shakes itself free of the obsession with the frequent.

Herein consists the importance of the Galileian revolution, with its quite different scientific ideals:

(a) It takes exceptions seriously, trying to discover laws which are of unrestricted generality.

(b) It takes the individual case seriously. Its object is to predict what Lewin calls "the unique course of an emotion". Whereas the statistical psychologist, told that a three-years-old child acts in a certain way, takes no interest in this fact if the behaviour is atypical (on the ground that only the typical is lawful), the Galileian scientist will regard the behaviour as a manifestation of certain laws, as presenting a scientific problem, even if no other child ever acts in this way. The Aristotelian scientist insists upon the importance of "repetition"; the Galileian scientist regards repetition as a historico-geographic concept, of no scientific significance.

Lewin considers that psychology will only find itself as a science when it adopts the Galileian ideal as its own, when it, too, is content with nothing less than unrestricted generality and ceases to find in mere frequency its criterion of scientific importance. So far, what Lewin maintains is in accord with the line of argument in this paper: psychological laws must entitle us to predict what will happen in a particular case, and they can "entitle" us to predict only if the failure of the prediction would falsify the hypothesis.<sup>17</sup> And we can agree also with his contention that repetition is of no particular

<sup>17</sup> For the complications here, see the discussion of falsifiability in my *Logical Positivism*, I, pp. 87-8.

scientific significance, that a single case may be enough for the discovery of laws.

This insistence upon the individual case has often been misunderstood. Sarbin, for example, assimilates Lewin's position to that of those clinicians who maintain that the individual case must be contemplated, by the help of some special faculty of intuition, as something which is *sui generis*, not susceptible to general laws (op. cit., p. 213). With Sarbin's attack on this doctrine it is possible to sympathise, but his criticisms touch Lewin not at all. For what Lewin is asserting is that *general connections are discoverable in a single case*. "The step from particulars to law, from this event to 'such' an event, no longer requires the confirmation by historical regularity which is characteristic of the Aristotelian mode of thought" (p. 31).

The origin of Sarbin's misunderstanding is not difficult to discover. Sarbin is what we might call a "naive empiricist"—he believes that a law is an assertion that a certain connection has been regularly observed: a law, in other words, is a compendious mass of observations. It is then incomprehensible to him how anyone could say that a law is discernible in a single case, since no single case is a compendious summary. An individual case, to Sarbin, is in itself lawless: it is lawful only as a member of a class of cases which have typically exhibited certain regularities (and this will be true, so we argued, if "to be lawful" means "to have a certain probability"). What, on the contrary, Lewin maintains is that a law describes every situation of a certain kind, so that the question how many such situations there are is completely irrelevant. On no other theory can we understand Galileian procedure, and its success. "The general validity, for example, of the law of movement on an inclined plane is not established by taking the average of as many cases as possible of real stones actually rolling down hills, and then considering the average as the most probable case" (p. 25).

There is yet a third characteristic of Galileian method, as Lewin describes it, and it is this which may make us pause.



For it strongly suggests that we are to abandon Aristotelianism only to fall back upon the theory of forms. "The law of falling bodies, for example, does not assert that bodies very frequently fall downwards. It does not assert that the event to which the formula  $s = \frac{1}{2}gt^2$  applies, the 'free and unimpeded fall of a body' occurs regularly or even frequently in the actual history of the world. Whether the event described by the law occurs rarely or often has nothing to do with the law. Indeed in a certain sense, *the law refers only to cases which are never realised, or only approximately realised, in the actual course of events*" (p. 12, my italics). This is uncomfortably reminiscent of the *Phaedo*, and so is his contention that "the law of movement in an inclined plane . . . is based upon the frictionless rolling of an ideal sphere down an absolutely straight and hard plane" (p. 25). But if laws refer only to cases "which are never realised", how can anything which actually happens confirm them, or anything which fails to happen, falsify them? How can it be also true, as Lewin maintains, that "on the basis of the strict concept of law it is possible to disprove the hypothesis, for example, of the existence of a certain instinct by demonstrating its non-existence in a certain case"? For "the strict concept of law" would not be concerned at all with *real* instincts as they *actually* operate. It does not seem to me that Lewin gives any clear answer to that question, but some answer must be found.

The facts are, at first sight, on the side of the Platonists. Laws like the law of falling bodies or the law of supply and demand are certainly *suggested* by observation, but in neither case do the laws describe what actually happens, at least if they are naively interpreted. Confronted with this fact, we may react in Berkeley's manner: "Gravitation or mutual attraction, because it appears in many instances, some are straightway for pronouncing *universal* . . . whereas it is evident that the fixed stars have no such tendency towards each other; and so far is gravitation from being *essential* to bodies, that in some instances a quite contrary principle seems to show itself: as in the perpendicular growth of plants, and

the elasticity of the air" (*Principles*, § 106). Or alternatively we might insist, in the manner of certain recent economists,<sup>18</sup> on the contrast between "pure science", which concerns itself only with ideal cases, and "the analysis of concrete situations", thereby abandoning the intimate relation between the two upon which Lewin insists. But how are we then to distinguish between "pure science" and "pure fantasy"? How are we to tell what follows from what in the ideal realm? And how, as is still maintained, can the "pure science" have "concrete applications"?<sup>19</sup>

Perhaps a clue to the solution of this problem can be found by a closer inspection of such "ideal" laws. Take Newton's first law of motion: "Every body continues in a state of rest or of uniform motion in a straight line, unless compelled by impressed forces to change that state". This is formulated by Cohen and Nagel as follows: "All bodies free of impressed forces persevere in their state of rest or of uniform motion in a straight line forever".<sup>20</sup> And in that form it is used by them to show that universal propositions are not "existential", that to assert that all X are Y is equivalent to asserting that if there were any X they would be Y, but does not imply the *actual* existence of any X. For, as they point out, there are in fact no bodies which are free of impressed forces. But, on this view, how is there any possibility of *verifying* the hypothesis? Would not this "law" be as meaningless as assertions about "round squares" or "politically-minded babies in arms"?

Suppose, however, we formulate this law (or the part of it which introduces fictions) somewhat as follows: "the extent to which the direction of a body's motion diverges from

<sup>18</sup> cf. Hutchins, *Basic Postulates of Economic Theory*; Robbins, *Nature and Significance of Economic Science*; Walker, *From Economic Theory to Policy*—and, for criticism, Partridge, *Theory and Practice in the Social Sciences* (this Journal, Vol. XXIII).

<sup>19</sup> cf. Anderson, *Empiricism* (this Journal, Vol. V, No. 4).

<sup>20</sup> *Logic and Scientific Method*, Bk I, II.2. See also Keynes, *Formal Logic*, Pt II, Ch. VIII. I am afraid that economists would find little in contemporary logical theory to disturb, and much to support, their conception of "pure science". It is not only economists who are "still haunted by the ghost of 'rational', 'a priori' science, 'pure deductive science'" (Partridge, *op. cit.* p. 95). That particular ghost is not easily exorcised; indeed, most contemporary methodologists would think that it is the exorciser who is the ghost!

a straight line is a function of the impressed forces acting upon it". Then we are left with a proposition which is confirmable and, therefore, leaves open the possibility of disproof. We appear to lose nothing of any empirical significance from the original law: indeed, we indicate much more clearly how the law can be used to make predictions.

By the use of this method, it is always possible to remove all references to fictions such as "a perfect vacuum", "complete elasticity", "conditions of perfect competition". Thus, instead of

"In a perfect vacuum,  $s = \frac{1}{2}gt^2$ "

we can write

"As the influence of friction is diminished,  $s$  approaches  $\frac{1}{2}gt^2$ "

or

" $S$  is a function of  $\frac{1}{2}gt^2$  and whatever impeding forces are operating".

Similarly, "perfect competition" can be replaced by the notion of "increasing and diminishing restrictions on competition", "perfect elasticity" by the notion of degrees of elasticity, and so on. In general, the empirical content of a statement about "ideal cases" is a statement about the relation between variables. It may be easier to formulate the laws by referring to "the ideal case" (i.e., the limit); no harm is done provided that we are not led to suppose (as has in fact happened) that our propositions are then "non-existential", "pure" or "theoretical".

But there is another class of laws which may still trouble us, those which contain the *ceteris paribus* condition:

"Other things being equal, if the price rises, demand decreases"

or, what is much the same thing:

"When the price rises, demand has a *tendency* to fall".

In such cases no limit is mentioned; are we to conclude that these are merely particular propositions in disguise? That here Berkeley's criticism has force?



An alternative is that we interpret them somewhat as follows:

"Except under conditions which it is possible to specify, if the price rises, demand decreases".

Such an interpretation lies at the root of the doctrine<sup>21</sup> that "pure laws" are not, properly speaking, propositions but rather "procedural rules": in Cambridge language, they "recommend" a particular way of tackling a problem. We do not, it is argued, regard these propositions as false merely because at a given time we cannot in fact specify the conditions in question. We merely go on looking for the conditions. Hence such statements cannot be intended as genuine laws, which are decisively falsified by the discovery of a single negative instance.

The real problem here arises out of the vagueness of the phrase "conditions which it is possible to specify". If this means that I (or someone else) can in fact specify the conditions, that I do not mention them by name only because they are so many in number, then, of course, the statement that "except under conditions which it is possible to specify, if price increases, demand decreases" has a genuine empirical content. It is simply an obscure way of saying that "except under conditions X, Y, Z, there is this relation between price and demand".

But if, on the other hand, "conditions which it is possible to specify" has no such reference to what a particular person can specify, then we are not putting forward a proposition, but only stating a problem, and suggesting the form of the solution which we are seeking. We are *looking for* a proposition of the form: "except under conditions X, if price increases, demand decreases"; our "law" is not *itself* a proposition (any more than "some X are red" is a proposition). It resembles a proposition in so far as *certain* of its constituents are terms; this is what may mislead us into believing that it is a proposition, but of a peculiarly "pure" sort. But in fact it becomes a proposition—it may be true or false—only

<sup>21</sup> cf. Kaufmann, *Methodology of the Social Sciences*, esp. 84 ff., 213 ff.

when the unrestricted variable  $X$  is replaced by some empirical term.

We may similarly be misled because of the rôle played in science by the conception of the "natural"; as when it is said to be "natural" for the price to vary with demand, or for a body to move in a straight line, or for an organism in a state of tension to move towards whatever it knows will satisfy that tension, or for a man to kill his father and marry his mother. Assertions such as these play an important part in science, and are susceptible of an empirical interpretation. A state of affairs is methodologically "natural" when it can be used in explanation in the following way: every situation of the kind  $X$  can be "explained" as a deviation from the "natural" caused by forces of a certain kind. Thus motion in a straight line is "natural" if we can explain every other kind of motion by referring to forces which prevent a body from moving in this way. Competition is "natural" if it is true, as Hobbes argues, that we can always explain the appearance of co-operation by referring to the forces (e.g., sovereign power) which prevent men from competing with one another. The only justification for taking a certain state of affairs as natural is that it assists us in the task of "explanation". But this, of course, is very important; it was a considerable step forward when motion in a straight line replaced circular motion as the "natural" movement of the planets or when, in Freudian theory, remembering replaced forgetting as the "natural" tendency of the mind.

However, scientists themselves have not uncommonly sought to find a somewhat different justification for taking a certain state as "natural"; they have argued that this is the "best" state (cf. the physiocrats) or the most common or the "primitive" (cf. Hobbes in the *Leviathan* and Freud in *Totem and Taboo*). In much current psychology the "natural" in the guise of the "normal" plays all three of these parts—it is at once the "ordinary", the "best" and the "original"—and at the same time may have its methodological significance as well. Confusions of this sort have obscured the exact

theoretical significance of an appeal to the "natural". And they have led to the putting forward of theories which taken literally are false, or even meaningless, and yet which it would be impossible to dismiss as worthless—theories which treat the "natural" not as something which has to be taken account of in every situation but as describing a certain kind of situation, if not upon this bank and shoal of time at least in some pre-historic age. (As if we supposed that at one time every body did move with uniform velocity in a straight line.)

It is now possible to understand the prevalence of the belief that there is such a thing as "pure science". For it is in fact the case that many of the statements made by scientists are either false or meaningless *if we take them literally*. And this can be true even when the statements concerned have an important rôle to play in scientific development. Thus, concerned to draw attention to a way of tackling scientific problems, the scientist may assert the existence as a distinct state of affairs of what is methodologically "natural". Concerned to solve a particular sort of problem, he may present the *formal* solution to a problem as if it were a real solution. Concerned to study the relations between variables, he may express his conclusions by referring to "ideal limits".<sup>22</sup> We do not feel like saying that his statements are false or meaningless, because we are aware of their empirical application. So we compromise by saying that their "truth" or "meaning" is *ideal*. But the fact is, we have argued, that such statements are a contribution to science, only in so far as they can be interpreted in empirical terms; or in so far as they open the way to empirical discoveries by indicating a method of approach.

It should be observed that even those laws which satisfy the requirements of the empiricist may not, by themselves, enable us to make the predictions in which we are particularly interested. Thus to know that "acceleration is a function of *g* and impeding forces" enables us to predict *something*

<sup>22</sup> In the history of economics, some economic doctrines have passed through these three stages in succession (*e.g.*, the laws of supply and demand).



about the acceleration of a falling body but not, by itself, what that acceleration will be, just as "all men are mortal" does not tell us *when* a man will die. Even if we know that "every man of 50 with angina dies before he is 70", this does not tell us when a particular man with angina will die.

It is this sort of consideration which leads to the suggestion, made by Walker, for example, that we should abandon "pure theory" in favour of "the analysis of concrete situations" (cf. Partridge, *loc. cit.*). But even though the knowledge of laws is not always *sufficient* (of course, it sometimes is) to enable us to make the sort of predictions which concern us, it is nonetheless *necessary*; to "analyse a concrete situation" is to discover what laws are relevant in the given situation (remembering that the "analysis" may suggest *new* laws). Thus, for example, "to analyse a situation" in the manner proposed by Lewin is to take account

- (a) of the tensions existing in the organism,
- (b) of the objects present in the organism's "field",
- (c) of the "barriers" lying between the organism and the attractive object.

The difficulties involved in this analysis need no emphasis; to predict how a given person will behave involves knowing how these tensions operate (i.e., knowing other laws) and precisely what "force" is exerted by the tensions, the object (its "valence") and the "barriers" (including social as well as physical barriers). Yet there is no alternative way of proceeding, at least if we are to develop the social sciences or if we are to "analyse" as distinct from relying upon "intuition". ("Intuition" is not here used in a dyslogistic sense, nor as implying any special faculty of "intuition". I mean by it what Aristotle calls "experience"—historico-geographically tied "nous".)

Whether these difficulties are greater in the social than in the physical sciences is another matter; greater in the sense that "more variables" and hence more laws have to be taken into account. It may be, as Lewin maintains, that the social sciences have not yet experienced their Galileian

revolution or, using the terminology of this paper, that they have not yet discovered (except perhaps economics) a "natural" starting-point. Perhaps, even, as Popper suggests, we underestimate the achievements of the social sciences because their laws (e.g., that power corrupts) do not tell us what we want to learn, somewhat as if we thought badly of medical science because it cannot ordinarily fix the date at which we will die. And certainly we need to take account of the intense practical demands which are made upon the "social scientist". Physics did not in its early days have to contend with such demands, and it was perhaps fortunate for economics that the brief victory of laissez-faire left it room for theoretical expansion, free from pressure "to make things work".

These considerations largely explain, if they do not excuse, the tendency of social scientists to think of themselves primarily as administrators, and to seek rather an improvement of administrative procedures than an extension of scientific knowledge. That social scientists should be thus preoccupied is bad enough, but it is far worse if science is *confounded with* administrative skill. It has been particularly the object of this paper to remove that confusion. This by itself does nothing to solve any scientific problem but it may help in the task of "removing some of the rubbish that lies in the road to knowledge".

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## SOME REFLECTIONS ON THE CAMBRIDGE APPROACH TO PHILOSOPHY (I).

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By SYDNEY SPARKES ORR.

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To the metaphysician of the older Schools one of the most extraordinary philosophical movements of the day has been that brought to prolixity by what is popularly known as the Cambridge School of writers. It is surprising because it seems to be little more than a revival of Humeanism, with a somewhat more technical terminology and a more subtle technique, but without Hume's acknowledgement, which came at the end of his work, that he had failed to solve his problem. On the contrary, the neo-Humeans claim to have perfected a technique or method which will solve all metaphysical problems—or rather abolish them, since it is not “solving” all questions to say, as they do, that the majority of them are illegitimate!—and that consequently metaphysics as heretofore understood is meaningless and futile. This at any rate is the position—the more consistent position, many think—of the earlier members of the School, the so-called Logical Positivists. Of late, however, no doubt as a result of the criticisms of people like Ewing and Broad, and the widespread alarm that has been excited at the summary and high-handed dismissal of an activity which has occupied the minds and energy of men since before the days of Socrates and Plato, many members and adherents of the Cambridge School have been at pains to dissociate themselves from the Logical Positivists and to claim that, at any rate since the appearance of Mr. Wisdom's article on “Metaphysics and Verification” in *Mind* (1938), the position has been so clarified or modified as to admit the possibility of metaphysics, and reinstate it as a fairly respectable occupation for minds



which aspire to an understanding of themselves and the world in which they find themselves.

But some of us do not think that this claim is justified. Considerations of space, however, and the fact that I am not familiar with the detail of all that has been written in support of this contention, will necessitate my confining myself to a consideration only of the position as revealed in this article, and of the so-called Verification Principle, which many people think to be still fundamental to the whole approach and method of the School. Certainly I find myself constantly being met with the request to "tell us what it would be like if it were true", before any concept other than one that is empirically verifiable is accepted as a possible matter for discussion. But owing to the Protean devices in which the various members of the School are so skilled, it is quite possible that the doctrine has by now appeared in a somewhat different form or forms, with the result that it may be said that I have been "flaying a dead horse"—to which I can only reply that I believe it to be but the same old horse in a different skin!

The purpose of this paper is therefore (1) to note certain difficulties in the Logical Positivist position, but mainly (2) to discuss the emendations of Logical Positivism proffered by members of the Cambridge School, and (3) to show that these do not achieve their purpose and that consequently Cambridge remains fundamentally Logical Positivist in outlook. Throughout the writing of it I have had the benefit of criticism and advice from distinguished adherents of the Cambridge School, who have placed at my disposal their more intimate insight into what is being said, and their more accurate knowledge of its most up-to-date developments. One of my contentions will be that these developments make little or no difference to the original position, with the result that, however much the label "Logical Positivism" may be resented or disavowed, it is still deserved.

The earlier, or Logical Positivist, position as it is represented in its most extreme form in people like Ayer

and Carnap is, we discover, not really new, since it is to be found in some sense in the discussions of certain pragmatists, such as Peirce, about how to make our ideas clear. The latter have told us that in elucidating the meaning of any statement or proposition, what we have to do is to consider what practical bearing it has, what difference it would make if true. And this, it is claimed, is the same sort of thing as is contained in the celebrated Verification Principle that "the meaning of a proposition is the method of its verification", which is just another way of saying that the Verification Principle is "a recipe for finding the meaning of a proposition". In other words what one does is to ask oneself "what it would be like" if it were true.

My own view would be that the meaning of a proposition is the relationship asserted between the concepts which it assumes; and that a proposition is true if the asserted relationship corresponds to a real relationship between entities independently of our cognising it or them. Knowledge, in other words, results from what Plato could call the co-operation of the reason within and the reason without. Consequently I am inclined to retort (a) that the meaning of a proposition is entirely different from, and in no way dependent upon, or necessarily connected with, the method by which it is verified; and (b) that "what it would be *like*" either to or for me, if true, is an entirely irrelevant consideration, for as a metaphysician what one is concerned with is whether or not the proposition *is true*, and not with the practical effects it may or may not happen to have. But this kind of objection is usually countered by pointing out that if, e.g., I want to tell whether or not there is a particular kind of germ in my blood, whether, in other words, it is true that there is, I can do so only if I know what sort of thing to look for, i.e., "what it would be like" if it were true.

Now if this means merely that we must have some idea of what we are looking for before we can begin our search for truth, then no exception need be taken. But in that case one would expect that from it would be drawn

Plato's conclusion, *viz.*, that there is some sense in which we already know, and that all learning is a process of bringing to birth or fruition ideas with which the mind is already pregnant. That is to say, that reason is pregnant because it has been impregnated by objective reality and has thus power to conceive; otherwise language would never have been invented, since it depends upon common names for common notions. This, however, is not the conclusion of the Logical Positivists. Their conclusion is that all those statements which are generally held to be metaphysical happen in fact to be statements that could not be verified because one does not know what would verify them—what, in other words, “it would be like” for them to be true. Such a proposition would be “God created the Universe”. As distinct from this there are other propositions like “There is a bus round the corner”, which are not metaphysical, and whose meaning we do know because we know “what it would be like” if this were true—which is just another way of saying that we know how to verify it. The proposition “God created the Universe”, however, is just meaningless, for we do not know “what it would be like” if it were true. It is in fact not a proposition at all.

To the question *what* it is (leaving aside for the moment the all-important question of what “it” refers to, e.g., the proposition itself, the fact about which it is a proposition, or the experience through which we apprehend or know the proposition or the fact, which the Logical Positivists never clearly indicate), they would say that it is a meaningless jumble of words like “Water go valled prime”. When one still persists that these two statements are not similar, or do not appear similar in any sense, that the former has a meaning for us which the latter does not have, and demands an explanation of (a) why the latter should seem ridiculous, and (b) why—even at its lowest—we prefer to say the former and not the latter, they reply (a) that “God created the Universe” does not *seem* to be a ridiculous statement for the simple reason that in grammatical form it looks like very



many sentences that do have meaning, such as "Tom made a sand-castle". That is to say it has a subject, verb, object, etc., whereas "Water go valled prime" does not have such a grammatical structure; while the answer to (b) is partly the same, but partly also (it is legitimate, they claim, to assume) because saying these words "God created the Universe" expresses an *emotional* attitude toward the universe in the same sort of way that lyrical poetry does, and one who prefers to say "God created the Universe" likes to say this for the same sort of reason that poets write their poetry. (The interesting implication here, that lyrical poetry is merely an expression of emotion and not of the creative imagination, which Wordsworth called "reason in its most exalted mood", is one which we cannot pause to consider. It has already been sufficiently refuted, e.g., by D. G. James, *Scepticism and Poetry*; Allen & Unwin, 1937.)

To the above contention one might reply that of course this proposition expresses, or may express, an emotional attitude towards the universe. But it does very much more than this, for such an attitude, if it does express it, is merely the consequence of grasping the meaning of the proposition, i.e., that no finite existence is self-explanatory, whereas an infinite and perfectly good being is. It is untrue to say that it is a statement without meaning, for it has exactly the same kind of meaning as the proposition "Tom made a sand-castle". In other words, it means simply that any finite object depends for its existence and nature upon a being that is its own *raison d'être*, whose existence depends on nothing else. Further, if God created the universe it would exhibit order. But order is not the result of chance; it means the reasoned adaptation of means to ends; it means the rule of law. But law, in Plato's language, is the "dispensation of reason" and "where there is reason there is soul".<sup>1</sup> It is the assumption of the experimental sciences

<sup>1</sup> See also Stout's argument in *Mind and Matter*, pp. 137-148, to the effect that teleological order, i.e. the reasoned adaptation of means to ends which experience progressively reveals in the universe, logically implies an ordering intelligence. We cannot explain the order that we find in things

that the processes of the universe do exhibit law and order, and that the human mind is able progressively to penetrate the secrets which the physical world of matter conceals within itself. The fact that this assumption works so well in practice (the scientist finds that the universe "makes sense", i.e., is the embodiment of reason) should be regarded by the Logical Positivists as a verification of the proposition that the universe makes sense and is therefore created by God! Though Theists usually require something more logical by way of proof, they are entitled to point out that if science had paid any heed either to Hume (on, e.g., causality) or to his modern disciples, it would have been robbed at once of its working principle and have ceased to progress.

With regard to ethical judgments too, the Logical Positivists inevitably say the same kind of thing, viz., that they express an emotional attitude; that "I ought to do this", for example, is like saying "I like to do this", or "My friends or society likes me to do this", etc. This, they claim, is what it means, or rather that it has meaning only in so far as it can be translated into some such terms. The objection to this, however, is that it is inadequate and a "mistranslation" (a) because it makes "ought" purely subjective, whereas what is experienced is an objective bindingness, and (b) because there is obviously a difference between "liking" and feeling one "ought" to do something, if only by reason of the fact that these two things often conflict. To take a concrete situation. I feel I ought, for the sake of other people's necks, to go slow because I do not know whether there

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apart from a supreme mind which dispenses that order. We know of no order that is not due to directive intelligence. Matter itself is not order. The only beings we are acquainted with are ourselves, and when we try to explain our behaviour we cannot do it apart from mental agency. But this is so related to a physical system that it allows us to express our mental activity. "For my mental agency is possible only through an immensely complex system of conditions preadjusted to it", which means that the System as a whole must be dominated by mind, that mind is correlated with the physical system throughout; otherwise it would be impossible to express our thoughts in action. "By assuming mental agency in nature as well as in human and animal life, we can bring them, in spite of diversity, under one principle, and if this principle is rejected, there is no other which will cover the facts."

is a bus round the corner. This is compatible with taking the risk of going fast. It also shows that an intangible entity, empirically non-verifiable, can be a real factor in a total situation; the intangible entity being my ignorance whether there is a bus round the corner. And it *can* make a difference or not, according to my concern or lack of concern for other people's necks, if not my own! It also shows that all these statements have a meaning; they are meaningful and hence can be true or false. If Logical Positivists deny understanding them, then they *ought* not to be allowed to drive a car!<sup>2</sup>

It would appear that the mistake they make in all these cases is that of confusing "likeness" with "identity". They most strenuously deny this, of course, pointing out that while it is true that some of the earlier members of the School did, the majority of the later Logical Positivists would not say that an ethical proposition is identical with an imperative or expression of emotion, etc., but at most that it is very similar. Now while it is true that "ought" may, under certain circumstances, appear to be similar to all these things, i.e., to liking, wishing or approving something, urging something upon people or commanding them to do it, it is not identical or co-extensive with any or all of them, for the simple reason that we often feel we ought to do something that we do not like doing, desire or approve of, etc., and vice versa. Nor is it even similar, as acts of self-sacrifice notoriously prove. And as Moore says about "good", whether we approve it or not, like

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<sup>2</sup> They would, of course, try to maintain that this "ignorance" is verifiable and quite simply too, they would say, viz., by seeing what the person does, observing his behaviour. But this is not so. The ignorance *itself* cannot be experienced. One can *infer* that it is there because of its sensible effects, but it is only the effects that we see and not the ignorance. There is something there which is not itself sensed and which cannot therefore be empirically verified. It is only the effects that can be empirically verified; the cause of these effects is inferred. And this applies to all our mental activities. A subjective side of mental life, from its own nature, cannot be an object of sense. It is quite clear, therefore, that in claiming to be able to deal with cases like these the Logical Positivists are going far beyond what is meant by verification in sense-experience. Besides they must stick to the given situation, which shows that ignorance is real, "makes a difference", but is non-verifiable *in that situation*. It is no answer, but the most patent subterfuge, to say what all this amounts to, viz., "*change the situation by going round the corner!*"



it or do not like it, whether indeed we even see it or not, *X* is good and cannot therefore be analysed into these things. It is in fact unanalysable.

In reply to this they would say, as they have said about Moore's argument, that this contention about "good" or "ought" being indefinable is not proved. You have not passed beyond the mere assertion that it is so and so. And even if it were true it would still be no more than a platitude or a tautology—very true, but very uninformative! In fact, equivalent to saying "good is good" or "ought is ought", which is how Moore himself puts it. All one is saying is that "ought is ought" and that's the end of it. But for them it is not the end, because they claim that more can be said about it; an analysis can be given of statements like "*X* is good" or "You ought to do so and so", and such analyses are as completely true, or as nearly true, as any logical analysis can be.

But to admit that the analysis is not completely true is surely to give their whole case away, for it is to admit that there is something more in the statement than mere liking, approving, desiring, etc., and that this something is different from such elements, and not expressible in terms of them. And to recognise this is to admit that the statement has a meaning which is not equivalent to, identical or co-extensive with any or all of them. The mere fact that it cannot be expressed in subjective terms is no proof that it does not have a real meaning. Besides the real point at issue is whether its meaning is different! And if they are willing to admit that while it is similar it is really different, then they will have to admit that there is something more than is capable of being verified in sense-experience; in other words, that ethical judgments are not (as the earlier Logical Positivists such as Ayer and Carnap argued they were) about matters of fact, but about values, which may or may not be realised. If the later Logical Positivists are now really admitting judgments of value, and thus surrendering the whole position, then of course we have no quarrel with them at all—provided that

these values are not just in empty air, like adjectives without nouns. Values are functions of substances, i.e., they must inhere in reality.

But while it would appear that many of the Logical Positivists are now anxious to repudiate this charge of subjectivism both in ethics and in metaphysics, the tendency towards it remains very pronounced not merely in the language they use—its ambiguity and lack of that definiteness which they insist so much on in others—but also in their actual conclusions. They pass almost imperceptibly from “like” used in an objective sense, and meaning “what *the object* is like”, to “like” used in a subjective sense, meaning “be like to or for me”, when they say that we must know “what it would be like if it were true”. As already indicated this is due to a complete failure ever to state clearly what they mean by “it”—whether the object of knowledge, the experience which we have of the object, or the actual experiencing of it; and their acknowledged connection with the theory of pragmatism confirms this.

Of course it is claimed that many Logical Positivists do clearly indicate what “it” refers to. They say that “it” is the sentence and talk only about sentences and the verification of sentences. But this is very “queer talk” indeed, to use one of their own expressions! For we all know what kind of thing a sentence is (viz., a subject, verb, object, etc.), and it appears just the same whether it is true or false. What then do *they* mean by a sentence? Surely not this—a mere collection of words? For if so, then of course it is meaningless and no question of its truth or falsity can arise. But if (and only if) the words refer to things in the external world, then it has a meaning and the question of whether it is true or not is a real and important one. We cannot consider a sentence as a self-contained entity. It is always a proposition which refers to something beyond itself, and it has no meaning apart from the objective reality to which it refers. Apart from this we can certainly tell what it is like, whether true or false; but no question of truth or falsity can

arise without taking into consideration the objective facts to which it refers.

What they really mean therefore, as we can see from their procedure, when they say that we do not know "what it would be like if it were true", is that we do not know what kind of experience we would have if this proposition were true. And therefore they are really referring to the facts and saying that we do not know what the state of affairs would be like. So if "it" means the sentence, then they must mean by "sentence" the external situation to which the sentence refers or could refer. And here they are most certainly adopting a correspondence theory of truth. But to assume any sentence or proposition meaningless is, on their principles, purely arbitrary. The Principle of Verification gives no criteria for distinguishing between meaningful and meaningless propositions. "Meaningless", therefore, for them means that they do not understand the proposition, they do not see its bearing on reality. To assume that no one else does is rank stupidity or arrogance. Or else it indicates that they do not want to understand it; that is to say, emotionalism, for even they are not exempt from these feelings!

They reply, however, by insisting that the only way we find out what a bus is like, i.e., really like objectively, is by finding out what it looks like from this distance and that, what it feels like to sit in, etc. But that "a bus means what a bus looks like" is refuted by the fact that ordinary language, not to mention manufacturers' specifications or the laws about public vehicles, defines buses in general terms which everyone understands, and not in terms of what they look like, which might be quite fallacious. What simplicity of mind to imagine that sensations alone will give sense-experience!

The mistake they make here is that of confusing the real object with the apparent object, and with what simply appears; or of failing to distinguish between the perceived object and the immediately experienced sense-data through which it is perceived. Their analysis of sense-experience is quite inadequate. What we have given is always a certain sense-datum, and through having this we are aware of an

apparent object. But this apparent object may not be the real object. Take for example the classical illustration of the stick in the water. I experience in the general field of view a bent, coloured sense-datum, and as a result I see a stick which appears to be bent. But the real stick may be straight, and I can account for its apparent bentness by taking into account the effect on light waves of the intervening water. Thus the fact remains that the real object *is* a straight stick yet it appears bent, and there is something which is bent, viz., the immediately experienced sense-datum within the general field of vision. The Logical Positivists confuse all these things and draw no distinctions to indicate what precisely they mean by "empirically verifiable in sense-experience".

It is usually pointed out, of course, that they do make a lot of distinctions and discuss the situation in a great deal of detail in all sorts of different ways. The sort of thing they say, roughly speaking, is that there is a perfectly true sensation statement reporting the presence of a sense-datum as of a bent stick. At the same time the proposition "a straight stick is present" is true and is confirmed by a large number of such sensation statements, including the present one, and including, e.g., "if one pulls the stick up one would get a straight stick sensation", etc. In fact, their position, it is claimed, is essentially that of Berkeley<sup>3</sup> answering the objection that on his principles the earth does not move because we do not see it moving. All he needed to do to refute this was to say that if we went out into space then we would see it moving. A physical object statement is verified by large numbers of reports of what sense-data one would get under such and such circumstances. For example, if in this particular case one had a sense-datum as of a straight stick, this would be one of the sense observations that would confirm the proposition that the real stick is bent.<sup>4</sup>

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<sup>3</sup> *Principles of Human Knowledge*, ed. Fraser, Section 3, p. 259; also Section 58, p. 289.

<sup>4</sup> Cf. Stout's view (below) of the way in which such statements are verified.



This, it is contended, is the kind of thing that the later Logical Positivists would say, although of course they do not usually put it in this kind of language. Most of them do not talk about sensations any longer, but simply about the relations of propositions, the relations between, on the one hand, what are variously called by different writers, object statements, protocol sentences, basic statements, etc., and on the other hand, physical object sentences, or as they sometimes put it, sentences in the physical language. That is to say, they express all of it in terms of language.

They will have to be much more precise than this, however, about what they mean by "a sense-datum as of a straight (or bent) stick". This means or ought to mean the sense-datum experienced when looking at a straight stick. But the straight stick is quite different from what we experience. It is not itself directly experienced at all, but is perceived through or by means of the sense-datum, and therefore we must be careful to distinguish from the actually experienced sense-datum what Stout has called "the perceptual datum", or the apparent object, and this in turn from the real object, or what is actually there, irrespective of how it appears on different occasions or to different percipients. This then is the whole point at issue—are they or are they not prepared to admit these distinctions between the *sensum*, the apparent object and the real object? Close psychological analysis shows that there are these three distinct and different things, and to speak vaguely or roughly about them as sensation statements, protocol sentences, physical object statements, etc., will not do. Until they speak precisely and recognise these different existents they are not dealing with the problem at all.<sup>5</sup>

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<sup>5</sup> As Stout says (*Mind and Matter*, p. 256), "We may and do know physical objects immediately, as well as *sensa*. But owing to the fact that the *sensum* does and the physical object does not enter into actual experience, there is a fundamental difference in the way in which we know them. The test of truth for the one is fundamentally different from the test of truth for the other. For the *sensa* it is direct scrutiny of the *sensum* itself. For physical phenomena it is the coherence of perceptual data with each other in a system. By a perceptual datum I mean the probability that a thing is such as it seems to be in this or that perception

That the Logical Positivists do not accurately draw these distinctions and that consequently the charge of confusing all these things is justified, would appear to be doubly proved when it is admitted, as above, that their position is essentially the same as that of Berkeley (or Berkeley without God as some of them are fond of putting it!). For Berkeley did not even distinguish between sensation and sensum. As Stout points out (*Mind and Matter*, page 164), "For Mill and Berkeley the distinction between sensation and sensum is without significance and is in fact ignored by them." But even if this is not true of the Logical Positivists, and if, on the contrary, it be maintained that the distinction is important and fundamental for them, then what Stout said (*loc. cit.*) of the Neo-Realism or, as he called it, the Sensational Realism of his day, can also appropriately be said of their particular version of sensationalism, viz., that "the old and the new doctrines are so far realistic that they agree in regarding the content of actual sensation as real in itself, and not as an ideal representation of something else which may or may not really exist. The new theory, however, differs fundamentally from the old in ascribing to sense a sort of permanence and the independence of individual experience which is ordinarily ascribed to things."

But whether we regard them as Subjective Sensationalists or Sensational Realists their position is untenable. In common with Berkeley and Mill they have to reduce physical

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(Continued from page 45.)

taken in isolation or comparative isolation from others by which it might be confirmed or upset. The point is that it is capable of this sort of correction, and the more so the more isolated it is. In this respect the phrase 'testimony of the senses' is significant. Each perceptual datum is the evidence of only one witness which has to be tested by the evidence of others, so as to elicit a coherent view which will account in some way for the evidence of all.

"On the other hand, so far as we are able to distinguish the actually experienced sense-datum from the perceptual datum, we can, merely by attentive scrutiny, form judgments concerning its intrinsic nature which are not liable to be upset and do not need to be confirmed by extraneous reasons. It is a precondition of the possibility of such judgments that in forming them what the physical object seems to be is distinguished from the actually experienced sensum. There is a risk of fallacy so far as the distinction is not accurately drawn."

objects to permanent possibilities of sensation, and then they make these permanent possibilities of sensation behave as actual physical objects. But, as Stout has amply demonstrated, (loc. cit., pages 163 and 205), "The whole theory breaks down when we recognise that sensations, actual and possible, have no fixed order of their own: the order of their occurrence is determined only as part, and a relatively small part, of the comprehensive order of nature which includes the body of the experiencing individual in interaction with external objects." And thus (page 209) "The error of sensational subjectivism is to attempt to substitute them (i.e., the sensible appearances) for physical existence. The error of sensational realism is that it treats *sensa* as physical objects." Until they admit the existence of physical objects as distinct from the *sensa* they cannot account for the variations in the *sensa* and the order in which they occur. They must acknowledge the existence of objects distinct from them in order to do this, and therefore unless they grapple with this distinction they are not tackling the problem at all.

It is this identification of the *sensum* with the real object that gives grounds for the charge that they really hold an exceedingly crude correspondence theory of knowledge. And one result of this is that it deprives them of the right to say whether the stick is or is not really bent. For them the thing is nothing more than what it appears, or seems like to me, and truth is thus what appears to each individual, with the result that we are really back at the position of Protagoras, i.e., that man—each individual man—is "the measure" of reality and truth. Even the extreme Logical Positivists, however, object most strongly to this and try to avoid it by saying that because the bus seems grey to one person, who may happen to be colour-blind, this does not mean that it *is* grey. When one asks why, they reply that if it looks red to all normal people under normal conditions of vision then it *is red* and red objectively. And when one points out that they have now merely substituted "many minds" as the measure, they are prepared to admit the point,

but claim that this is in fact how we do decide that the bus has colour and what colour it is. To this one can only reply that it has never been the accepted method of ascertaining metaphysical truths. In matters of this kind, as Plato showed, the majority opinion is seldom true. They are quite willing to concede this, but retort that they are not discussing *metaphysical* propositions, because they are only talking about propositions that have meaning! When, however, one considers which comes first—the proposition or the meaning—it is obvious that it is the meaning. The proposition is, to put it in Platonic language, “for the sake of the meaning”. Consequently “meaningless proposition” is an abuse of terms meant to describe artificial pseudo-propositions which are mere imitations invented by the Logical Positivists to travesty the real thing.

Their position is thus really absurd, for on their own showing the proposition involves the assertion that the bus *has* colour (and similarly that the act *has* moral quality, etc.), which *is* a metaphysical assertion, and which also shows, as argued above, that for all their talk about empirical verification they have really accepted the correspondence theory of knowledge, which they appear to be anxious to avoid, but in a particularly crude form.

Again when they claim, e.g., that on their principles it is meaningful to say that there is a bus round the corner when they are not actually observing it, they are really asserting with Mill that a thing is a “permanent possibility” of sensation. A possibility, however, is determined by actuality, for by possibility here is meant that in certain circumstances this or that observable fact is possible. But it is possible only in so far as the given circumstances make the alternatives possible. When I say, for example, that rain will fall tomorrow, I do so only because the meteorological conditions make this possible. The possibility exists only because there are certain facts which make either alternative possible, from our limited point of view. When, therefore, the Logical Positivists can believe that there is a bus round



the corner without actually seeing it, they are admitting something independent of sense-experience, but something which can give rise to a sense-experience, and are consequently admitting that there is something in the world which is other than and more than sense-experience, and thus that knowledge goes beyond sense-experience. In other words, they are conceding that we can know more than the contents of sense-experience, and therefore something that cannot be verified in sense-experience.

It is usually pointed out, of course, that the verification of an unseen bus round the corner is really quite simple; for it would be in terms of the sensations which we and others would get on rounding the corner. And we are asked to compare the example already quoted, in which Berkeley considers and answers this very same objection. This, it is claimed, substantially gives the Logical Positivist reply to such criticism. But here it must be clearly noted that it is the *possibility* of a bus being round the corner that is asserted. To go round the corner is to verify a different proposition, viz., that the bus is or is not there. And, as already emphasised, it is no answer but the merest subterfuge, to say that the proposition could be verified if the situation or the proposition were different! For it is *this* situation, on this side of the corner, and *this* proposition that "it is possible that there is a bus round the corner" that we are concerned with, and this cannot, in the given circumstances, be verified by sense-experience merely.

But let us look for a moment at the strange procedure adopted by the neo-Humeans. They declare that they are talking only about propositions that are empirically verifiable. (We shall omit for the time being the question of whether there are any such, and of what verifiability can possibly mean at this level or in this sphere—whether, for example, it means anything more than probability, thus giving not truth at all, as Plato showed, but mere opinion.) These, apart from tautologies, are the only meaningful ones. In other words, they rule out all non-empirical propositions as

meaningless because they are not verifiable, i.e., verifiable in their sense, which in the end amounts to in sense-experience. If therefore one takes the view that metaphysical so-called propositions (such as "God created the Universe") are not empirically verifiable, they are declared to be meaningless. In this high-handed manner they dismiss metaphysics as nonsense (which in one sense, of course, it is, viz., *nonsense!*). Metaphysical questions are thus invalidated because, or in so far as, they are not empirical propositions, or capable of being reduced to empirical propositions. But the generally accepted view of metaphysicians, and particularly of Plato, has been that metaphysical propositions are in the nature of hypotheses put forward to explain empirically discovered facts; and if this is what they are, then it is absurd to insist that they must be expressible or explicable in terms of the very empirical facts which they purport to explain.

But the position of the Logical Positivists is even worse, for when they rule out metaphysical propositions as meaningless or nonsensical because they cannot be reduced to or shown to be equivalent to empirical propositions, what they clearly mean by "empirical propositions" is "statements about the sensations which a certain person, or the majority of people, would have under certain circumstances". What they ask us to accept, therefore, is nothing but crass empiricism or sensationalism, as if Hume had never tried and failed, and Kant had never drawn attention to his complete demonstration of its utter bankruptcy! Indeed even Hume himself frankly admitted the failure of his sensationalism at the end of his work, for he said that he still continued to walk about the world and to act as if certain things were true; but how or why this should be so he had been unable to explain, which meant that his philosophy had proved inadequate to solve his problem.

The Logical Positivists are quite willing to acknowledge, of course, that it will not give us metaphysics, but add that they never claimed it would. To which we have surely the right to reply that it was they themselves who asserted that

metaphysical questions are meaningless, and on this ground that they are not reducible to sensations or expressible in terms of sensations. It is the Logical Positivists who lay down the law—quite dogmatically surely—that metaphysical questions, or any questions, in order to be meaningful, must be reducible to propositions that can be empirically verified. And this they admit, pointing out indeed that it is just what is implied in their original statement, the celebrated Verification Principle with which we began.

It is surely pertinent therefore to ask on what grounds the Logical Positivists assert that meaningfulness is equivalent to empirical propositions, or statements reducible to terms of sensation; that is to say, on what grounds they assert the truth of the Principle of Verification itself. Are we to take it that this is empirically verifiable? In other words, have we, or any group of people, under any circumstances whatever, a sensation which could be described as the Verification Principle? Because if we have not then the assertion of this principle as the one and only criterion of truth and meaningfulness is sheer dogmatism. And of course it *is* absurd to say that we have any such sensation, for the Verification Principle is not an empirical assertion, and they are quite prepared to admit this. In fact they even go so far as to say that they never said it was! On their own showing, therefore, it must be a metaphysical statement and therefore a jumble of words without meaning. In short, not a statement at all. If, on the other hand, it is a real proposition, then it *has* meaning, and therefore a non-empirical proposition—one at least—is admitted to have meaning; and we have surely a right to ask why not others as well? This is in fact an arbitrarily chosen principle, and no reason is or can be given, consistently with their own presuppositions, why should we accept this any more than the principles, for example, of Plato or Kant, as the criterion of truth and meaningfulness; or why it should be regarded as more adequate, or even so adequate, as the other principles which such philosophers regarded as the presuppositions of experience as we know it.

The word "Verification" (verum = true) implies some method or way of proving a statement true. If therefore we translate the so-called Verification Principle into simple language, what it amounts to is that "A statement means (not what it says but) the way in which it is proved to be true". In other words, a statement does not mean what it means, but does mean all the little bits of sense-experience which it summarises! There are obviously innumerable fallacies here. Given their own empirical standpoint (and this applies also to Mr. Wisdom and the Cambridge philosophers, as will be demonstrated later), the Principle of Verification must be merely verbal, since any universal affirmative proposition means for them only a statement about an indefinite number of particulars. But it is not (from our standpoint) a universal at all, even if the enumeration were complete. "All spiders have eight legs", for example, would for them mean that "all examined instances (with date and name of examiner) have eight legs"; and could be disproved by exhibiting one with seven (little Johnny having pulled one off). But "all spiders have eight legs" is not a proposition of complete enumeration, and is not meant to be.<sup>6</sup> It is a necessary proposition—necessity of nature, not universality of enumeration, being the significant thing about it. This seems to be the Logical Positivist view of the Universal Affirmative Proposition, viz., that it is meant to be completely enumerative. Now the Verification Principle is a Universal Affirmative Proposition (= "Every proposition means . . ." etc.); hence

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<sup>6</sup>I am reminded here that most of the Logical Positivists (and the Cambridge philosophers) would repudiate this suggestion that they treat Universal Affirmatives as propositions of enumeration. My contention, however, is that although they might not think they are so regarding them, they are in fact committed to this view, as will become clearer later when Mr. Wisdom's article is brought under consideration. It is pointed out that they would say various things, e.g., that universal affirmatives are related to particular statements in a way that can be quite easily exhibited; while many would give an analysis in terms of variables: "All A are B" is equivalent to "for all values of X, X is A implies X is B" (i.e. "materially" implies, as distinct from "entails", which is the converse of "is deducible from"). But it still remains the case that they *cannot* say, i.e., have no grounds for saying, "for all values" unless they enumerate them all.



it looks formidable and meaningful only so long as we take it in the ordinary (i.e., *not* in the Logical Positivist) way of taking a Universal Affirmative Proposition, i.e., as stating a necessary truth which has not only been found true in the past, but *will be* found true (in future instances of which we cannot as yet have had experience). But if it is taken as the Logical Positivists *ought* to take it on their own view of the Universal Affirmative proposition, all it means is that this, that or the other statement has been found, to somebody's satisfaction, to mean the way in which it is proved to be true, i.e., to be only a summary of a very finite number of examined or experienced instances. Such a principle is not a principle at all; it has no value for criticising, predicting or discovering whatever. In a word, it is not heuristic. So the Logical Positivists are inconsistent again—like Bertrand Russell, who after denying causality, says that dyspepsia was the cause of Carlyle's pessimism! In our view universality, causality, necessity, etc., are data of intellectual experience, and if people deny their nature they can only be refuted by *reductio ad absurdum*, as above.

It is thus extremely difficult to see what worth there is in this first principle of theirs which, whatever they may say, amounts simply to the assertion that there is nothing real, or rather that *they* are not going to admit anything real, except that which is verifiable in sense-experience. All one can do here is to point out, what is also a fact of experience, that even empirical propositions often have a meaning which goes beyond sense-experience. In other words, there is a great deal more in experience than sense-experience. For example, propositions such as "I like cocoa" and "he likes tea" contain the "I" and the "he" as well as the "liking", both of which are other than and different from the cocoa and the taste of cocoa. Immediate experience contains a great deal more than feeling and sense-experience: it contains cognition and conation, as well as something which knows and is active, and these are not reducible to, or expressible in terms of, each other. Such propositions as "Tom likes to

play football" are, for instance, in a sense empirical propositions; yet they are not verifiable in sense-experience because, as already emphasised, a subjective aspect of mental life, from its own nature, cannot be an object of sense. We cannot prove that Tom likes football merely by asking him, for the simple reason that he may refuse to tell whether he does or not; or may tell falsely. And his playing it does not prove that he likes, any more than his not playing proves that he dislikes, it. Such propositions are non-verifiable in sense-experience; nevertheless they have a meaning and can be true.

One can only conclude, therefore, that their fundamental thesis, since it ignores the fact that immediate experience is always of a living, conscious and willing being, is simply a piece of arrant dogmatism. They reduce conscious process to a long series of sensations, when in actual fact it is very much more than this, viz., a self attending to, or knowing, as well as feeling something other than itself, whether this be sensations or objects. A series of sensations is not a conscious process. A sensation is not of itself conscious. It is a physical action and reaction. One might as well say that a typewriter is conscious. Their analysis of experience therefore is not only inadequate but wrong, and when they go on to say what meaning is they are merely dogmatising and necessarily mistaken, or involved in an unprofitable *petitio principii*.

The Logical Positivists have thus committed themselves to a certain definition of meaning, but they cannot claim that this definition itself is either a sensation or a statement about sensations. What they do not realise is that sense-experience alone will never give any statement. They apparently start with statements as data and assume that they get them from sense-experience. In stating such an assumption about sense-experience they are already transcending sense-experience, since the assumption is not self-evident or analytical, and is in fact demonstrably false.

What they now say about their definition of meaning is that it is a verbal proposition (they are very ingenious

when faced with apparently unanswerable objections to their theory!), i.e., a statement about the meaning of certain words—"about what meaning means, if you like", they say! But when they say this surely they are admitting that these words mean something, and therefore that the word meaning has some meaning for them. And yet they are also saying that one has to explain the meaning of meaning and give a definition of it. They are thus contradicting themselves, or involved in an infinite regress, for they are saying that one cannot know the meaning (ABC) of meaning (x) unless one knows the meaning (KLM) of the meaning (ABC) of meaning (x) . . . and so on ad infinitum. Or to put this otherwise, we can say that when the Logical Positivist asks what meaning means he implies that it is unintelligible until defined, but by the very asking of the question he is conceding that the word has meaning.

It is this extraordinary failure of theirs to recognise ultimates which we cannot fully and exhaustively define, but which nevertheless have meaning, that makes their position so unacceptable to metaphysicians of the older schools, who would say that while it is true that we cannot define things like good, moral obligation, etc., because in order to define them we have to use synonymous terms; yet we can define them by negation, as it were, for we know that "I ought" does not mean merely that I approve, like, must, or am forced to, etc. That is to say, it is not co-extensive or necessarily equivalent to any or all of these; there is something more and other than these in it. And although we cannot define this something more, it nevertheless has a meaning, which is proved by the facts of experience every day when people pass moral judgments. If "ought" were equivalent to "like", for example, then when people say that "A likes X, but ought not to do it" this would be equivalent to saying "A likes X, but does not like X", and therefore to contradicting themselves. Similarly "ought" cannot be equivalent to approve, must, or any of the other elements which the Logical Positivist analysis reveals, taken singly or together, for if it

were then it would fall under the Law of Non-Contradiction and be, not merely a meaningless, but an impossible statement or proposition. In like manner "I ought" quite obviously does not mean "I am", and therefore "ought" cannot be reduced to or said to be synonymous with "is", as some members of the school apparently attempt to do.

There is thus a real ambiguity in the position of the Logical Positivists, which we may express thus. When they assert that the Verification Principle is a statement about the meaning of certain words, or about the meaning of meaning, does this purport to be a statement of what meaning means, or of *what they are going to mean* by meaning? For if it is the former then it is false; if the latter, it is not particularly interesting and leads us nowhere, except perhaps to the conclusion that there is a certain game which people like professional philosophers *can* indulge in by defining terms in an agreed fashion and then seeing what follows from them. And if they are going to talk in this way, then there is nothing anybody can do about it, except perhaps to let them proceed with their fruitless pastime and ensure that it is not confused with metaphysics or philosophy in our institutions of learning. For the question now arises whether or not they have any right to speak of truth as *what they* are seeking or attaining. They talk about the truth of propositions and at the same time refuse to admit the reality of any facts, other than sensations, independent of these propositions. But here they are refusing to recognise that no real proposition arises apart from the relation of an objective fact to a mind which makes some assertion about it—says that it is so and so or something else. The question of the truth or falsity of a proposition does not arise apart from the subjective attitude of some mind which is independent of the facts in which it is interested. Truth is a quality which belongs to propositions: these are asserted by some mind and the proposition is true when what is asserted to be a fact actually is the fact. According to this view, which has been expressed so forcibly on many occasions by



G. F. Stout,<sup>7</sup> "A proposition does not consist merely in the existence or non-existence of an objective fact. It also essentially involves the relation of objective fact to a mind capable of believing, disbelieving, doubting, entertaining a question or making a supposition. Such relation to a mind is constitutive of a proposition as such, though it does not of course determine what the proposition is. It does not determine whether a proposition is true or false, but apart from it there is neither truth or falsity." Inasmuch, therefore, as the Logical Positivists refuse to recognise what we are now insisting upon, their procedure is quite arbitrary. But since we shall have occasion to return to this question of truth in criticism of the "more enlightened" members of the Cambridge School, we shall postpone discussion of it until then.

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Many adherents of the Cambridge School are in the habit of referring to Mr. Wisdom's article on "Metaphysics and Verification"<sup>8</sup> as one place where they claim will be seen quite clearly that they have renounced the Verification Principle, at any rate in the sense in which it is used by the Logical Positivists, as well as the view that metaphysics is impossible or merely a matter of analysis.

Now it is true that in this article Mr. Wisdom *appears* to call in question the Verification Principle. Indeed he reduces it not merely to the status of one metaphysical theory among others, but to being the epitome or summary statement of a whole series of metaphysical theories, all of which he himself regards as, and demonstrates to be, unsatisfactory. With extraordinary temerity he divides all metaphysical theories to date into two groups, the first of which—containing all naturalistic, empirical, and positivistic theories, as well as all formalist theories of mathematics, Logical Positivist views regarding necessary truths and certain subjectivist theories of ethics—he regards as "reductive", because

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<sup>7</sup> E.g. in this Journal, 1940, Vol. XVIII, No. 2, p. 130.

<sup>8</sup> *Mind*, Vol. XLVII, No. 188, 1938.

they attempt to analyse or reduce everything into "nothing but" something else, e.g., physical objects to mere sensations and possibilities of sensation, mind to a bundle of perceptions, beauty and good to nothing but the feelings of approval and so on which they arouse in the spectator. The second or opposite type of metaphysical theory, which includes all common-sense, realist and transcendental theories, he calls the "Idiosyncrasy Platitude", because they maintain that there are not only sensations, perceptions, feeling, etc., but "something over and above" all these things which explains them.

Our surprise at such summary and "reductive" treatment of so many "diverse" theories (as we had thought) is only equal to that occasioned by the dogmatic declaration which follows that "there are not other answers to these metaphysical questions". Well may the simple-minded wonder how Mr. Wisdom can possibly know this, both sensation and reason being ruled out as ways of knowing, since he goes on to demonstrate that both types of theory—the first based on sense-experience or verification in sense-experience, and the second based on what he calls a "peculiar kind of reason and problematic inference"—are mistaken and cannot give knowledge!

Having satisfied himself on the matter, however, he concludes that all metaphysical conflict finds expression in the question "Shall we or shall we not accept the Verification Principle?" That is to say, shall we or shall we not accept one type of theory rather than another? But, as already indicated, many of us think that the important question from the metaphysical point of view is not whether we or anyone else accept or do not accept, like or do not like, a particular theory or type of theory, but whether or not it is true. According to Mr. Wisdom, this is a matter of no importance, since he believes "that once its general nature is apparent the question 'Is it true or not?' vanishes into insignificance while its important metaphysical merits and demerits will have become apparent in the process". And he promises, by an examination of its general nature, to explain to us

this mystery of how it can have metaphysical merits apart from its truth, and even if, as he later admits, it is in fact not literally true.

In typical Cambridge fashion, he immediately qualifies his statement that it is a metaphysical theory by admitting that it is "a peculiar sort of metaphysical theory". In other words, it is and it isn't a metaphysical theory! It is, he explains, "not so much a metaphysical theory as a recipe for framing metaphysical theories", by which he seems to mean that it is equivalent to saying "always reduce or analyse" things—one thing into another. And this in turn, he tells us, means that it is a recommendation to use the word "mean" in a particular way, i.e., not in the way we use it now, but in such a way that we will say that P means the same as Q if and only if Q can be verified by empirical observations in the same way (i.e., by pointing to the particular sensations a person would have under certain conditions). And this "recommendation", he says (p. 455), "is not for the purpose of metaphysically illuminating the use of 'meaning', but for another metaphysical purpose, namely the illumination of the use of expressions which on the recommended use of 'meaning' will be said to mean the same". In other words it is not a real definition of "meaning" but a verbal one, and yet it is "metaphysically illuminating"! This is explained by pointing out that there are many statements, such as those of poetry, fiction, conventional usage, etc., which are not meant to be taken literally, and which if so taken will be false; for example, that a motor-cycle, "as one may describe (it) to a Red Indian" (p. 487), is "a sort of horse" (p. 456), "because it is a sort of tireless horse on wheels". Nevertheless, they can still be "illuminating" in the sense that they emphasise a likeness that might otherwise be overlooked.

The contention, therefore, would appear to be that when the Logical Positivist says that an assertion about a physical object means the same as an assertion about actual and possible sensations, e.g., that "a chair exists" is equivalent

to "certain sense-data exist", his statement, taken literally, is untrue, but still "illuminating" in that it serves to bring out something that tends to be overlooked, and this something, which comes to light later and is really Wisdom's own position, is that we have no other means of getting to know about physical objects than by sensations. It is for this reason that he claims that whether or not the assertion is true (although he has already said it is *not* true) is relatively unimportant. What matters is whether it is "illuminating". But to assert that something is untrue is to admit that there is such a thing as *Truth*. Wisdom thus establishes his own position that *truth does not matter* by assuming the untruth of Logical Positivism—which at least shows that he has a conception of truth, and objective truth at that!

Unfortunately for Mr. Wisdom, however, the Logical Positivist asserts that the Logical Positivist position is true, for he says that the chair is the sense-data and nothing more. In other words, his statement is *not* a recommendation to use the word "meaning" in a particular way, but is intended to relate meaning to truth and actuality, and therefore to illuminate metaphysically the use of the word. He says that any proposition about a chair can be analysed into a proposition about sense-data, and is therefore claiming that what anybody means, and rightly so, when he says that a chair exists is that certain sense-data exist. And this too, it will be seen, is all that Mr. Wisdom himself and his disciples mean by "meaning" for they profess not to understand the meaning of any statement whose meaning is not in some way a matter of actual or possible sensations.

Yet he tells us here that the Verification Principle, i.e., that the statement that only sense-data exist is not literally true, but that he calls it a metaphysical theory only for the purpose of "drawing attention to certain likenesses" which it has to other metaphysical theories, and thus making those who accept it notice the "deplorably old clothes in which it presents itself", and ensuring that those who reject



it, because they are taken in by its disguise, shall "not fail to recognise the merits which, like other metaphysical theories, it conceals"—this "merit" being apparently that the only evidence we have for the existence of the chair is the sensations which we and other people have of it. And it is just this fact, which Wisdom accepts as the truth it contains, which would be most strenuously denied by the advocates of the opposing theories, with the equally emphatic assertion that consequently it has no merits as a metaphysical theory at all! For even Hume admitted that if you begin by saying there is no evidence you can never justify the assumptions upon which you proceed in ordinary life, and therefore you fail to deal with the problem of knowledge. But he believed the assumptions valid and acted upon them, although he could not theoretically justify them. If, on the other hand, all that is meant by this statement is that there is an element of sense in all knowledge, then it is a "likeness" with which we are perfectly familiar from the work of Plato and Kant, and therefore Wisdom need not have gone to such trouble to point it out again to us. But it is not what the sensationalist, empiricist, or Logical Positivist means or regards as the truth of his theory!

Wisdom then goes on ostensibly to show that all these metaphysical theories—including the Naturalistic and Positivist theories—are inadequate or unsatisfactory because they proceed on a mistaken conception of what metaphysics is and what the metaphysician is doing. And, of course, we cannot object to this. Any man is at liberty to assume that everyone who has gone before him was mistaken, or in a psychologically unsatisfactory state of mind, provided he does so consistently—provided, that is, he does so on the basis of some new and as yet undiscredited principle which he can justify; that is to say, so long as he does not assume the truth or superiority of one of the theories or lines of thought and tacitly use it, even after it has been rejected as unsound, as the basis for criticism and rejection of the other opposing theories. And this, we shall try to demonstrate, is

precisely what Mr. Wisdom does. I am well aware that the "defenders of the faith" will be quick to claim that all that he is doing is putting forward the arguments which each side brings against the theory of the other, and which makes it appear unsatisfactory; and that he is not necessarily committing himself to either view. But Wisdom cannot, any more than can anyone else, "run with the hare and hunt with the hounds" in this way, without assuming the truth or partial truth of one or other of the opposing theories—unless of course he claims to be omniscient and able to say in what respect each is true, and so far as one can discover, Wisdom does not explicitly make this claim or appear to be doing this, for the truth of the theories in question is for him unimportant! In that case all he is doing, as will become clear presently, is making a series of contradictory statements and placing them side by side, or else simply telling us, like Sir Roger de Coverley, only at much greater length, what we already know, viz., that "much might be said on both sides", which does not in itself supply us with any principle or criterion upon which to decide what part of all that is said is untrue.

Wisdom supports his contention that metaphysics cannot be a matter of analysis, verbal or otherwise, or that this is not what the philosopher really wants, by pointing out, with the help of numerous examples, all sorts of ways in which such analyses have proved unsatisfactory, but which may be summarised by saying that they are unsatisfactory because either the proposed analysis was in terms so similar that it was regarded as not profound enough, i.e., not a metaphysical analysis, or else in terms so different that it could not be regarded as meaning the same. The metaphysician, for example, will not accept the analysis of a nation into nothing but the individual citizens that make it up, which is like the phenomenalist analysis of a chair into the "chairish sensations", because (a) it is incorrect to say that statements about individuals or sensations mean the same as statements about nations or chairs, and (b) it does not go far enough,

for we still want to know what individuals and sensations are. In other words, we will want more of the same sort of thing, i.e., analysis into something else, and it cannot be done.

The metaphysician is thus demanding the impossible, viz., another statement sufficiently different from the original not to be a mere synonym; that it be a genuine and profound analysis and yet not so different that they do not both mean the same, and this is impossible because it is a self-contradictory request, i.e., a request for something which is the same and yet not the same.

Wisdom then goes on to give a great many examples of this "paradox of analysis", as he calls it, in the case of attempted analyses of numerical, temporal and general propositions. In no case are we satisfied with the analysis, he claims, because it either retains the idea of number or time in some form or another, or else it ends with the phrase "and so on", which still contains the idea of generality; while, on the other hand, if it does not we refuse to say that the two expressions mean the same. In other words, what we are asking for is the impossible—the translation of numerical into non-numerical, of temporal into non-temporal, of general into non-general, statements that mean the same—because we are asking for the self-contradictory and therefore for nothing. Such a translation thus describes no process, says Wisdom, just as finding a purple Union Jack describes no process.

Now this, it will be noted, contains the unwarranted assumption that any philosopher of note—apart perhaps from that small group of philosophers (e.g., Russell and Moore) who initiated the movement out of which the Cambridge School developed—ever regarded metaphysics as merely a matter of analysis. (Certainly they all thought metaphysics was something more, whatever they were in fact doing.) It would be extremely difficult to point to anyone else who has behaved in this extraordinary manner of asking for an analysis and then refusing to accept his own considered analysis. The metaphysician is looking for ultimate truth,

and because he is he recognises that there are certain ultimate facts which cannot be reduced to something else. He analyses things to see if he can get an ultimate, and when he does he accepts it and does not go on trying to reduce it to something it is not.

The truth of the matter is that analysis is, and always has been, regarded as only part—and a preliminary part at that—of the work of the metaphysician, and that many philosophers have been content with certain analyses; content, that is, that they had reached an ultimate fact, whose explanation, along with that of other facts, they saw was then demanded. Other philosophers, of course, have frequently rejected these analyses as unsatisfactory for various reasons, and have professed to offer better ones, but always with the intention of revealing the true nature of the facts to be explained or accounted for. In other words, all that Mr. Wisdom is telling us, at such length and with the help of so many examples, is that all philosophers are not agreed or prepared to accept either the same account of the nature of the facts to be explained, or the same theory about them; that is to say, that many will not be content with sensationism, empiricism, or phenomenalism, and that others (including Wisdom himself) will find the realist or the transcendentalist position and analyses unsatisfactory. But the question still remains as to which account of, and theory about, the facts is the more adequate or true—the sensationalism of Hume, or the realism and idealism of Plato and others. For Wisdom, of course, the truth or otherwise of the theories concerned is irrelevant. What matters is whether they are “illuminating” or not, though what they may “illuminate” we have not yet discovered.

What matters for our purpose at the moment, however, is why Wisdom finds the realist or transcendentalist analyses unsatisfactory. Such analyses are unsatisfactory, he says (p. 470), because they “describe no process not merely in the sense in which ‘completed the old course at St. Andrews in 25’ describes no process that has or will be carried out, but



in the sense in which 'squared the circle', 'found a perfect movable pulley in which W did not balance  $\frac{1}{2}W$ ', 'found a leopard without spots and a purple Union Jack' describe no process". That is to say, they describe no process because a pair of mutually contradictory propositions cannot both be true.

Now at first sight here it would appear that it is the facts that determine what is self-contradictory—there cannot be a Union Jack which is both red, white and blue and at the same time purple. But, as usual, when we enquire of "the friends of Cambridge" (for they all speak in this way) why two mutually contradictory propositions cannot both be true, we are told that this is simply because "*we won't let them*", which means that they are no longer talking about facts, for they could hardly claim omnipotence to such an extent as to claim that it is they who determine the impossibility of two contradictory matters of fact. This is the significance of Wisdom's inclusion of the "perfect pulley" proposition in his list of examples, for this shows that it is really the non-contradictoriness of concepts, or logical consistency, that they have in mind—which is just another example of their extraordinary agility in slipping almost unnoticed from one realm to another by the use of imperfect analogies. It is logical contradiction they are now talking about; such contradiction apparently being independent of the facts, or anything that happens in the sensible world, for we are explicitly told that if we find a pulley in which W does not balance  $\frac{1}{2}W$  we never say that it is a perfect pulley. Instead we say that it is not, and attribute the variation to some accidental factor such as friction, etc. In other words, we define what we are going to mean by a perfect pulley, and then refuse to accept anything which does not conform with this; so that nothing we ever find will be taken as contradicting our definition, which we are determined to save at all costs.

Now this is surely to reduce logic to the level of geometry, non-contradiction to the consistency of concepts, and possi-

bility to that which is in conformity with agreed definitions. Most thinkers heretofore, however, have regarded logic as an analysis of our ways of thinking about reality for the purpose of discovering how we ought to think. That is to say, they have regarded it not merely as an interesting game we engage in on the basis of agreed assumptions, meanings and definitions of terms, but as a systematic attempt to discover the laws and principles according to which valid thinking about reality can take place. What logic admits, therefore, and what it *can* admit, as possible is that which is determined by the facts, for, as Kant has demonstrated, possibility must have grounds in actuality and concepts must have a material content. And it is just because certain contents are inconsistent that certain concepts are; otherwise there would be no ground for distinguishing between the possible and the impossible.

Underlying Mr. Wisdom's and the Cambridge School's contention, that nothing we would ever find would contradict our definition, is the Humean assumption that the contrary of every matter of fact is possible, and that consequently non-contradiction is confined to logic regarded as a system of agreed concepts. But, as Professor Stout has pointed out in "Mind and Matter", Hume had no warrant for asserting universally that this is true. For it is only if we are speaking in terms of concepts and forgetting or abstracting from reality that Hume's statement that "It is equally conceivable that the sun will and that it will not rise tomorrow" holds good. This is evidently true, Stout says (p. 193), "if we consider only the event of the sun's rising or not rising, in abstraction from the context of prior, concomitant, and subsequent circumstances". And he goes on (p. 194): "There is in the long run no self-evidence which is not what I have called evidence from the nature of the case. This holds for the principles connecting premises and conclusion in deductive as well as in inductive reasoning. The formal principle of the syllogism, however we may formulate it, can be seen to be evident only by *realising what it means*;" (our italics; not

*deciding* what it means!) "and in the end we can realise what it means only by reference to particular examples of this, or essentially analogous, types of inference. This is the point of Locke's doctrine that 'God has not been so sparing to men to make them barely two-legged creatures, and left it to Aristotle to make them rational'. Even the Law of Contradiction is self-evident only in experience and not independently of experience. To quote Locke again, the child who has never heard of the Law of Contradiction or is incapable of understanding it, knows 'that an apple is not fire'; and he cannot know this without knowing that it cannot *also* be fire. In such special instances he learns what it is to be incompatible or inconsistent only implicitly in apprehending particular instances of it. Hence he is not yet capable of understanding what is meant by the Law of Contradiction. But when he comes through such processes as comparison and abstraction, to distinguish incompatibility in general from this, that or the other special case, he is in a position to grasp what is meant by saying that the same subject cannot have two incompatible predicates, or that a proposition and its contradictory cannot both be true. To see that this is evident it is sufficient that we understand what it means. But what it means can be apprehended only in particular instances such as 'an apple is not fire'. Hence it has no evidence which is independent of their evidence. It is valid as a condition of possible knowledge through experience and not otherwise."

It would therefore seem that Mr. Wisdom and his friends have got to make up their minds what they mean by logic and what precisely its relation is to metaphysics regarded as an account of the nature and meaning of the facts. They are, of course, quite at liberty to mean anything they like by it, turn it into a kind of geometry, mental gymnastics or what they will, but what they are not entitled to do, without a new and clearly expounded epistemology, is to identify it *with* metaphysics, or a knowledge of reality, by switching in this subtle manner from examples dealing with facts and

the relations between facts to examples dealing with concepts used in their own sense of agreed definitions. Either the concepts are dependent upon the facts for their filling or content (in which case there is an objective right and wrong or true and false), or else they are not (in which case there is not); and even then they must explain what exactly they mean by the facts—sense-data, immediate experience in the sense of sensation, or that which is given through immediate experience or sensation and which is other than and more than the *sensum*.

That the possibility of concepts is determined by actuality is, however, really admitted by Wisdom, though the actual for him appears to be mere sense-data; and that consequently the reason why he will not accept certain analyses or concepts is that they are not verifiable in sense-experience, is clear from the way in which he goes on to explain the nature of the paradox of analysis, or why it is a paradox, by the illustration of the purple Union Jack. This shows that, as usual, he wants to have it both ways, i.e., to say that it is because the facts will not permit such a thing and that it is we who decide that the two ideas are incompatible. His contention is that the fact that a reductive analysis is impossible is not a matter of our being unable to find the analysis, but of the nature of the facts. The facts are such that there is no analysis of the sort we demand (e.g., of temporal facts into non-temporal). A man uses the expression "perfect pulley" in such a way that in his usage a "perfect pulley" in which  $W$  does not balance  $\frac{1}{2}W$  describes nothing or is self-contradictory. The request for such a thing asks for nothing, Wisdom says, since the form of words describes nothing. He then goes on to explain that it appears to ask for something because, although in his usage of a "perfect pulley" in which  $W$  does not balance  $\frac{1}{2}W$ , this describes nothing, there is, or we can easily imagine, another usage in which it does describe something. As an illustrative parallel, he says that there is a usage of the words Union Jack in which purple Union Jack describes nothing, i.e., a person A



may so use the words Union Jack that he will refuse to call any flag a Union Jack if the colours are not red and blue, etc., but various shades of purple, even though it may have the same pattern of crosses as ordinary Union Jacks. But someone else, B, might adopt another usage in which purple Union Jack does describe something, i.e., so use the words that he would call a flag with the same pattern of crosses as normal Union Jacks, but in various shades of purple, a purple Union Jack. The request to be shown a purple Union Jack is a request for nothing, a self-contradictory request, if the words Union Jack are used as A uses them. But if they are used as B uses them, then finding a purple Union Jack does describe something and the request is not self-contradictory. A's request asks for nothing; B's request, put in the same words, asks for something. But the fact that A's request is self-contradictory tends to be obscured by the fact that there is what Wisdom calls a "contingent copy" of what he wants, viz., that which B, using the same words in a different sense, is asking for.

In other words, reductive analysis is impossible, or rather Wisdom will not accept it, unless we can express the result in terms of something sensible to be found in the world, and the request is self-contradictory only because he wants things which may be non-sensible expressed in sensible terms. But who else, we may ask, wants this? Surely no one but Wisdom himself and his followers. In fact this is their constant method of approach in metaphysical discussions. Whenever terms other than those designating actual or possible sensible objects are used, they ask "What would it be like if it were true?" which shows that they are still applying the Verification Principle, in the Logical Positivist sense too, i.e., verification in sense-experience, as if it were not only true, but the one method of ascertaining truth and determining fact or reality. For it is worth noting the alternatives with which we are faced: either (1) our request is a self-contradictory request, i.e., a request for nothing, in which

case it cannot be satisfied, because one cannot find nothing we are told; or else (2) it is a non-self-contradictory request, i.e., a request for something, in which case it ought to be capable of being satisfied. When, however, it is not capable of being satisfied, they arbitrarily rule it out on the grounds that such a thing is not to be found in the sensible world. That is to say, they rule it out on the grounds that, while it is a request for something, it ought not to be a request for something because there is nothing there. In other words, the something is nothing and the non-self-contradictory request is a self-contradictory one. It would certainly seem to be the case that someone is either saying nothing here, or else involved in self-contradiction! And it is now clear that in both cases the reference is to verification in sense-experience, and if the request is a request for something that cannot be verified in sense-experience, i.e., for something non-sensible, it is arbitrarily decided that it is a request for nothing; in other words, that what is non-sensible is not real.

This comes out even more clearly, and is explicitly declared to be the position by Wisdom himself, when he turns to explain what he calls "metaphysical double vision", with which he says so many philosophers are afflicted, and to remove which positivistic lines of thought are adopted. This arises, he tells us, because on the one hand we feel convinced, for example, that the chair is nothing over and above the "chairish sensations", that nations are nothing over and above the individuals that compose them, since the chair or the nation is not something we ever meet with in experience. In other words, what we know is always some sensation or other; and we note here the Humean assumption, which is nothing more than an assumption, that all we know are isolated sensations, impressions, etc.

On the other hand we feel, he admits, that facts about nations cannot just be translated into facts about sensations without remainder. Yet we know about nations or chairs by knowing about the behaviour of individuals or sensations, which alone are immediately perceived. Again we note the

assumption that we are immediately aware only of sensations or individuals, which is surely a piece of dogmatism, and which is just what would be called in question by the opposing philosophers, on the grounds that we are also immediately aware of objects, i.e., of sensible qualities related in a particular way and forming a certain unity or character complex, and that as well as individuals or particulars we are always aware of a whole of which they are parts, or of a universal of which they are instances. The contention can only be true, they would say, on the assumption that knowing or being aware of is equated with sensing. But if this is so, if all we are aware of are sensations, then the possibility of an objective world and objective knowledge or truth about it becomes impossible, if we are going to be consistent. And Wisdom admits that the motive for this desire to reduce everything to sensations is that it guarantees certainty. Such people, he says, will never be happy until they reach the philosopher's paradise where a man speaks only of his own sensations. But this is absurd, which is no doubt why he makes no attempt to explain how such a state is possible, or even conceivable, for if we know only our own sensations how could we know that they are ours and how could we possibly make statements about them? Is the existence of the self verifiable in sense-experience?

What is most important to note, however, is that he still apparently accepts the verification principle, i.e., verification in sense-experience, if that were always possible, as the only certain and intelligible method of proof, the "incorrigible knowledge" as he calls it, "the ultimate categories we have sought so long", for he goes on to indicate that if we take the other line of saying that chairs are not just sensations, etc., this gives rise to puzzles, the very puzzles which the positivistic line is designed to remove. As he puts it on p. 460, "unless the positivistic analyses were correct the epistemological difficulties, How do we know that chairs and other minds and value predicates exist?, could be answered only by intuitionism (special way or knowing),

scepticism (we don't know), dogmatism (we know somehow—never mind how)", or again (p. 480): "Notice how a transcendental ontology is associated with scepticism, intuitionism and problematic inference of a *very* peculiar kind", viz., that of saying that from sensations we can infer with probability that there are chairs, etc., in the same sort of way that in science we can infer germs in the blood from bodily symptoms with a fair degree of probability. All this amounts simply to saying that these other ways of knowing are inadmissible or unintelligible because they are not the same as sensing. To say that we know by reason in the Platonic sense of "the eye of the soul", or in any other sense, is for Wisdom obscure and unsatisfactory because it is different from verification in, or not discoverable by, sense-experience and experiment. And not only is it declared to be very puzzling and mysterious, but the existence of any such intellectual data as essences or forms or principles of reasoning is denied. (I am thinking of the principle of causality, e.g., which is such a datum and so cannot be proved except by reducing to absurdity the denial of it.)

The fact that definition along these lines, i.e., in terms of sensible qualities, is not possible, leads, he tells us, to "entrancing tales about elusive essences". It is impossible, he declares, to define a cow, because it is impossible to get any finite group of sensible qualities which are severally necessary and jointly sufficient to constitute a cow. And as a result of this there is a tendency to think that being a cow consists in the possession of something over and above all these characteristics of having four legs, horns, etc., which philosophers have called the real essence, and which we are supposed to come to know of by reason, or to infer from the characteristics in some mysterious kind of way. Since all we ever see when we look at a cow is its horns, its four-leggedness, its colour, etc., but never its essential cowness, the "problematic inference" from the perceived characteristics to the essential cowness is, he thinks, a very peculiar one. But from the fact that we cannot state a finite set of charac-



teristics, which every cow necessarily has, it does not follow, Wisdom asserts, that there is something other than these characteristics which the word cow stands for, and which may be inferred from the characteristics. X is a cow does not state that X has an essence distinct from the visible characteristics. It is related to such statements as X has horns, X is four-legged, brown and so on, *in a way with which we are perfectly familiar*. We can always explain, if asked, what a cow is, or what it is for people to form a nation, but we must always finish our explanation with "and so on". It is impossible to state the relation of "X is a cow" to these other things in a definition of finite length, but this does not mean that being a cow is not a matter of having four legs, etc.

But it is just here that many people would fail to follow Mr. Wisdom, for if, as he has already said, *none* of these characteristics are severally necessary or jointly sufficient to constitute a cow (e.g., we could have a cow with five legs, or without horns, etc) it is extremely difficult to see on what grounds<sup>9</sup> he makes out that being a cow is a matter of having four legs, etc. And if he does not know anything other than these sensible qualities or characteristics which, on his own showing, are contingent and non-essential, how does he *know* when he has got a cow? By what right indeed does he presume to use the word "cow" at all? That he ever had the temerity to label six uncorded bundles of sense-data in succinct language as six goats, in something (another cloud of sense-data) which he had the foolhardiness to call a field, is a matter for amazement! His certainty that two and two make four is also astonishing. The statement has been doubted; it has also been "disproved" (to the satisfaction of the materialist) by experiment, for it is not the case that when two electronic bodies are added to two electronic bodies the result is four electronic bodies. On his own showing, Mr. Wisdom has no right to speak about anything but his own sensations, or sensible qualities. And, as Plato has shown in the *Theaetetus* and *Sophist*, he cannot do even this; for

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<sup>9</sup> See "the only remaining hypothesis . . ."; *infra*, p. 74 ff.

if one has only sensations one cannot speak at all. The senses cannot compare, or say that this is like that and that is a cowish sensation-bundle, which is what is involved in the recognition of a number of cows; they cannot penetrate to reality, i.e., they cannot say "is" or "is not", "like" or "unlike", etc. Ideas of existence and likeness (and "likeness" is implied in all "grouping" of sensations or sensible qualities) are valid data for intellectual cognition. Wisdom, however, uses them illegitimately all the time, because, although he does not realise this, he could say nothing without thinking of universals, essences, or natures, common to members of a class. If "cowish" or "chairish" is to be explained by infinite enumeration of sensations, then (a) it cannot be done, as Wisdom himself admits, and where the notions of cow or chair came from is thus the blackest mystery ever conceived! And (b) even if it could be done, there would still be no explanation, for, as Plato shows at the end of the *Theaetetus*, taking a whole to bits explains nothing unless the bits themselves are explained; and if this means taking them to bits and so on ad infinitum, one ends where one began, except for an increasing sense of futility and despair.

A universal is an ultimate meaning, a form of unity, but Wisdom refuses to admit any such thing. It does not exist apart from its instances, but these are always instances of a universal. A cow is an animal of a particular kind. It is true that every cow is different; they have all separate characteristics, but all form one class or kind, and the class or kind is grasped by thought, and not by sense.<sup>10</sup> If this is denied the only remaining hypothesis is the Humean one—constant conjunctions fortified by belief. And this is in fact the declared position of Wisdom and his friends, for they claim it is merely the constant conjunction of particular sensible qualities that gives a certain empirical basis for the admitted linguistic leap of calling the creature a cow.

But there is no leap involved at all, unless one assumes that one begins with *sensa* and then proceeds to universalise

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<sup>10</sup> See G. F. Stout on *The Nature of Universals and Propositions* in *The Proceedings of the British Academy*, Vol. X, p. 157.

them; whereas (as Kant and Meyerson have emphasised) the truth of the matter is that the sensing and the universalising go on in parallel. It is not a leap if we are all agreed to call this and that a cow. We are agreed because we have grasped the class of objects called cow, and the very existence of general terms in ordinary language shows that we do grasp this class or kind. Particulars are always particulars of a certain kind. Further, belief for Hume is a mechanical necessity; something that we just cannot help. According to him we cannot give any rational justification for it. But this is only on his own assumptions, as he recognised. This necessity of nature is no doubt a very potent justification for the leap! But it does not explain or rationally justify it. And we are only compelled to make the leap if we begin with Hume's assumptions that all that we are aware of are the contents of immediate experience, and that these are isolated sensations, impressions and ideas. If, however, we take the other view that we know more than the contents of immediate experience thus understood, that, e.g., we know relations, universals and such like, or that experience is always of things related in particular ways, then reality is an order of such a kind that there cannot be any alteration anywhere in that order without a change taking place elsewhere, and that no event can occur without adequate cause.

Because he holds that particular data as we are immediately aware of them are entirely "loose and separate", that the existence of each is self-complete and independent of the existence of the others, Wisdom's philosophy plunges us into, what even Hume himself realised it to be, a bottomless pit of absurdity. He professes not to be able to "see" any connection between things and thus admits, like Bertrand Russell, to seeing no logical reason for believing in the existence of the external world.<sup>11</sup> Yet apparently he too still continues to

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<sup>11</sup> Mr. Wisdom's friends point out here that he would not say that we have no reason for believing that there are cows in the field. He thinks, they argue, in fact he knows, that we have very good reasons, among them being the fact that we see them, touch them, smell them, that other people tell us, etc. These reasons as a matter of fact, they say, are the actual reasons. My contention, however, is that they are not, as Hume

believe in his own existence, for it is noteworthy how frequently he uses the word "I" in the course of his article. But this is also illogical; for what can it possibly mean for Wisdom? Surely not a group of sensations or events. A string of unrelated events, as Hume could have told him, should not be bundled together and called an ego! In order to give the word "ego" a sense it ought, on his principles (or lack of them), to be analysed into the events, and then the events ought to be analysed, and so on *ad infinitum*. In other words, what he has not "seen" is that the intellect must be granted this power of insight into universals, without which terms like "cow", "chair", "I", etc., would not only be meaningless, but would never have come into existence. Language testifies to this power of the intellect. Intellect knows that universal essences exist. It does not presume to say fully and exhaustively *what* they are, nor is it under any obligation to do so.

(*To be continued.*)

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(*Continued from page 75.*)

himself pointed out, and that it follows from Mr. Wisdom's whole position that there is no logical reason for believing in the existence of the external world (whatsoever he or his followers may inconsistently claim). They ought to begin from the fact that we are all agreed that there are cows in the field, i.e., that there is an external world. But this is the fact to be explained—an ordered world beyond and independent of us. Here, however, the whole question arises again as to whether the touch sensations, etc. are the cow, or whether the cow is something in the external world which we perceive through the touch, visual and other sensations. This is just what they are not clear and refuse to be unambiguous about. Will they or will they not admit that there are *physical objects* which we apprehend *through* touch sensations, smells and other sense-experiences, but distinct from them? For if they do, then they must also admit that we can and do know more than sensory data or sensible qualities. But they cannot have it both ways.



## A REFUTATION OF MORALS.

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By JOHN MACKIE.

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[In this paper I do not pretend to be advancing any particularly new ideas: hardly any of the arguments are original, and indeed most are the stock instruments of all modern discussions of morals. But I think I am justified in offering this re-statement of them, because it is seldom realised how they may be brought together and interrelated, or how radically destructive they are of all common views of morality, when this is done.]

We all have moral feelings: all of us find that there are human actions and states of affairs of which we approve and disapprove, and which we therefore try to encourage and develop or to oppose. (This emotion of approval is different from liking, one difference being that its object is more general. If someone stands me a pint, I like it: if someone stands an enemy of mine a pint, I dislike it: but I should approve of a state of society which provided free beer all round. So if I hear of someone whom I have never met and to whom I am personally indifferent being stood a pint, I should not say that I like it, for I am not directly affected, but I may well approve of it, because it is an instance of the sort of thing I want to see everywhere. A thorough distinction of approval from liking and other relations would require further discussion, but perhaps this will serve to indicate a contrast between classes with which we are all in fact acquainted. I shall suggest later a possible source of these generalised emotions.) But most of us do not merely admit that we have such *feelings*, we think we can also *judge* that actions and states are right and good, just as we judge about

other matters of fact, that these judgments are either true or false, and that the qualities with which they deal exist objectively. This view, which almost everyone holds, may be crudely called "believing in morals". A few sceptics, however, think that there are only feelings of approval, no objective moral facts. (Of course the existence of a feeling is an objective fact, but not what is commonly called a moral fact.) One of their main arguments is that moral facts would be "queer", in that unlike other facts they cannot be explained in terms of arrangements of matter, or logical constructions out of sense-data, or whatever the particular theorist takes to be the general form of real things. This argument is not in itself very strong, or even very plausible, for unless we have good *a priori* grounds for whatever is taken as the basic principle of criticism, the criterion of reality, the mere fact that we seem to observe moral qualities and facts would be a reason for modifying that principle. Their other main argument, which is both older and more convincing, though not logically conclusive, is that although at any one time, in a particular social group, there is fairly complete agreement about what is right, in other classes, other countries, and above all in other periods of history and other cultures, the actual moral judgments or feelings are almost completely different, though perhaps there are a few feelings so natural to man that they are found everywhere. Now feelings may well change with changing conditions, but a judgment about objective fact should be everywhere the same: if we have a faculty of moral perception, it must be an extremely faulty one, liable not only to temporary illusions, as sight is, but to great and lasting error. Of course it may be that every society except our own is mistaken, that savages are morally backward because they lack our illuminating experience of the long-term effects of various kinds of action, and so on. But this complacent view (not indeed very popular now) is shaken by the observation that the variations in moral feelings can be explained much more plausibly not as being due to mistakes, but as reflections of social habits. This moral

relativity would be less alarming if we could say that the varying judgements were not ultimate, but were applications to different circumstances of a single principle or a small number of principles, which were everywhere recognised—for example, that whatever produces pleasure is good, that whatever society commands is right, or, at the very least, that we should always do what we believe to be right. But these principles are not commonly laid down first, and the particular judgements deduced from them: rather the particular judgements are made by ordinary people, whereas the principles are later invented by philosophers and manipulated in order to explain them. In any case there is just as little agreement about principles as about particular judgements.

We find on further enquiry that most, perhaps all, actual moral judgements are fairly closely correlated with what we may call social demands: any society or social group has regular ways of working, and, in order to maintain these, requires that its members should act in certain ways: the members—from whatever motive, perhaps mainly habit, which has compelled them to adapt their desires to the established customs—obey these requirements themselves and force their fellows to do so, or at least feel obliged to obey and approve of others obeying. They call “right” and “good” whatever accords with these ways of working. Moreover as the science of social history develops, it is more and more strongly suggested that ways of working and institutions have their own laws of growth, and that the desires or moral views of individuals do not so much control the history of society as arise out of it.

Belief in the objectivity of moral qualities is further undermined when we remark that whenever anyone calls an action or activity or state of affairs right or good (unless he is speaking in an ironical tone or puts these words in inverted commas) he himself either has a feeling of approval, or desires that the action should be done or the activity pursued or the state of affairs come into existence. (Only one

of these alternatives is necessary, but they are often found together.)

None of these considerations is conclusive, but each has a certain weight: together they move the moral sceptic (who is often of a scientific and inductive turn of mind, and less devoted than some others to the clear light of intuition or the authority of reason) to conclude that in all probability we do not recognise moral facts, but merely have feelings of approval and disapproval, which arise in general from social demands and therefore vary from one society to another. This view I intend to examine and re-state, and to advance what I regard as decisive arguments for one of its more important aspects.

The simplest formulation of this view is that when someone says "this act is right" he means merely "I approve of this act". The well-known reply simply leaps into the reader's mind: when one person says that an act is right, another that the same act is wrong, they would not on this theory be disagreeing, whereas in fact they think they are. It will not do to say, with Stevenson,<sup>1</sup> that there is a disagreement in attitude, but not in belief: they think, at any rate, that they disagree in belief. Nor does one mean that "society approves of this act", since we frequently meet people who say "I know society approves of this, but it is wrong all the same". But there is no need for argument: direct introspection shows that when we use the terms "right", "good", and the rest, we never intend merely to state that there are feelings of approval. An improved formulation of the sceptical view is that in saying "this is right", and so on, we are not *stating* any approval, but only *expressing* one, that words like "right" and "wrong", "good" and "bad" are to be compared not with "red" and "square" but with exclamations or ejaculations like "ow!", "boo!", and "hurray!" This is certainly nearer the truth, and avoids the previous difficulties, but is, in another way, just as unpalatable. For we do not think that we are merely ejaculating when we talk in moral

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<sup>1</sup> *Ethics and Language*, Chapter I.



terms. If we did, and if someone disagreed with us, we should merely disapprove of his approvals, and either try to coax him into a different emotional attitude, or if he proved obstinate, knock him down. In fact we reason with him. These facts, and the logical tangles that we get into when we try to re-state fairly complex moral situations in the "boo-hurray" language, prove that we think, at least, that we are not merely expressing our emotions but are describing objective facts, and therefore that the meaning of moral terms is not parallel with that of ejaculations. Many refutations of the "boo-hurray" theory have been worked out, but they all depend upon and illustrate the fact that we *think* that we are doing things of quite different sorts when we say "right" and when we say "ow!" Now if philosophy could do no more than elucidate the meaning of the terms of common speech, remove confusions and rationalise the thought of ordinary men, there would be nothing more to be said. Moral terms do mean objective qualities, and everyone who uses them does so because he believes in objective moral facts. But if the very terms of common speech may include errors and confusions within themselves, so that they cannot be used at all without falsity, if, we may add, philosophy may be permitted to enquire into these errors by observing a few facts for itself and founding inductive conclusions on them, the moral sceptic need not be so soon disheartened.

But he must modify his view again, and say that in using moral terms we are as it were objectifying our own feelings, thinking them into qualities existing independently of us. For example, we may see a plant, say a fungus, that fills us with disgust, but instead of stating that we have this feeling, or merely expressing and relieving it by an exclamation, we may ascribe to the fungus a semi-moral quality of foulness, over and above all the qualities that a physical scientist could find in it. Of course, in objectifying our feelings we are also turning them inside out: our feeling about the fungus is one of being disgusted, while the foulness we ascribe to the fungus means that it is disgusting. The supposed

objective quality is not simply the feeling itself transferred to an external object, but is something that would inevitably arouse that feeling. (No one would say, "That fungus is foul, but I feel no disgust at it".) The feeling and the supposed quality are related as a seal or stamp and its impression.

This process of objectification is, I think, well known to psychologists and is not new in philosophy. I believe that it resembles what Hume says we do when we manufacture the idea of necessary connection out of our feeling of being compelled, by the association of ideas, to pass from cause to effect, though here the process of turning inside out does not occur.

There are strong influences which might lead us thus to objectify moral feelings. As I have mentioned, our moral judgements seem to arise from approvals borrowed from society, or from some social group, and these are felt by the individual as external to himself. It is for this reason that they are universal in form, applying equally to himself and to others. They are thus formally capable of being objective laws, in contrast to the "selfish" desires of the individual. This generality or universality, which I mentioned as characteristic of the emotion of approval, is reflected in Rousseau's doctrine that the general will and therefore law must be general in their object, and in Kant's criterion of the possibility of universalisation of a moral law. Since we inevitably tend to encourage what we approve of, and to impose it upon others, we want everyone to adopt our approvals, and this will most surely come about if they have only to perceive a genuinely existing objective fact, for what we feel is in general private, what we perceive may be common to all. Suppose that we approve of hard work: then if as well as a feeling of approval in our own minds there were an objective fact like "hard work is good", such that everyone could observe the fact and such that the mere observation would arouse in him a like feeling of approval, and even perhaps stimulate him to work, we should eventually get what we want done: people would work hard. And since what we want does not

exist in fact, we naturally construct it in imagination: we objectify our feelings so thoroughly that we completely deceive ourselves. I imagine that this is the reason why our belief in moral objectivity is so firm: we much more readily admit that the foulness of a fungus is an objectification than that the depravity of people who break our windows is. If moral predicates were admitted to be what the moral sceptic says they are, we should never be able to extol a state of affairs as good in any sense which would induce people to bring it about, unless they already wanted it, though we might point out that this state had features which in fact they did desire, though they had not realised this: we should never be able to recommend any course of action, except in such terms as "if you want to be rich, be economical"; nor could we give commands by any moral authority, though we might again advise "if you don't want a bullet through your brains, come quietly"; and we should never be able to lecture anyone on his wickedness—an alarming prospect. The temptations to objectify feelings of approval, and to retain our belief in morals, are clearly strong ones.

This process of objectifying our feelings is, then, neither impossible nor improbable: there is also abundant evidence that it is just what has occurred. It is commonly believed by moralists that good means desirable in a sense such that the mere recognition that a thing is good makes us desire it, and similarly the conclusion of the practical syllogism is both "this is right" and the performance of the action. This is what we should expect if "right" were the objectification of a tendency to compel or command the kind of act so described, and "good" of desire and approval. This is again indicated by the use of the term "value" which is clearly borrowed from spheres like economics where value is created by demand—in fact a quality manufactured in imagination out of the relation of being demanded by someone, the abstraction being the easier because the demand is not essentially that of a single buyer, but of an indeterminate crowd of potential buyers: the analogy with the objectification

of moral feelings, aided by their generality, is very plain. Anderson has pointed out (in "The Meaning of Good", published in the *Journal* for September, 1942) that whenever anyone argues "Y is good, X is a means to Y, therefore X is good" he must be using "good" in an economic sense, as relative to some demand: now this is one of the commonest forms of argument in ordinary moral thought. There is nothing inconsistent in saying that "good" is the objectification of both desire and approval: its meaning is not quite fixed, and approval both is a development from liking and desiring, and attains its end when its object is generally desired. Further evidence is given by the categorical imperative, which looks very much like an abstraction from the commonplace hypothetical imperative, "if you want this, do that", and which may be described as the making objective and so absolute of advice which is properly relative to the condition of the presence of the desire. "Naturalistic" theories of ethics, which seem so absurd to a logician like G. E. Moore, who insists on the objective-quality aspect of moral terms, represent as it were partially successful attempts at objectification. "The good is the desired" and suchlike statements, which recur with remarkable persistence in philosophic history, plainly betray the emotional origin of moral terms. But there is no need to multiply examples: almost every moral term and style of moral thought may be seen to be borrowed from less lofty spheres, and in the course of the transfer objective qualities have appeared where only emotions were previously recognised.

In attempting to give an account of the origin of moral terms in this process of objectification, I do not, of course, claim that it is complete or precise in all respects. It is still open to discussion and correction on empirical grounds. We might go on to consider this process as a psychological process, investigating its causes, its similarities and contrasts with other mental processes, and the steps of which it is made up. We might ask whether "objectification" or some other name is really the most suitable, and also what are the precise



motives objectified: we might consider, for example, Westermarck's argument<sup>2</sup> that "ought" normally expresses a conation, is sometimes but not necessarily or essentially imperative, and has its origin in disapproval rather than approval.

My discussion in this paper is intended to open the way for such discussions, not to settle them once and for all. What I am concerned to establish is simply the logical status of moral terms, not the psychological details of their origin; in effect I am asserting only that there are no facts of the form "this is right", that when we use such words the only fact is the existence of some feelings in ourselves or in others or in both, but that in using these terms we are falsely postulating or asserting something of the simple, objective form "this is right".

I am not, of course, disagreeing with the point mentioned several times by Anderson (for example in "The Meaning of Good", p. 120) that "I like this", "I approve of this", "this society approves of this", are all statements of objective fact and would in any particular case be true or false. But they are all of a different form from statements like "this is right", the latter attributing a predicate to a subject, the former asserting a relation between two or more things. When I say that we objectify, I mean that we believe in the truth of statements of the subject-predicate form.

This re-statement does away with the logical difficulties previously encountered by moral scepticism. Nor are there, I think, any non-logical difficulties in the way of our accepting this view, except the persistence of the belief that moral facts are objective. It might be claimed that this firm belief is based on an intuition, but it has no further arguments to support it, and we have indicated social and psychological causes which would produce such a belief even if it had no foundation. However firm the belief may be, therefore, it is not valid evidence for the existence of moral facts. But the true moralist will not be deterred by lack of evidence: he will perhaps be compelled to admit that moral judgements are

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<sup>2</sup> *The Origin and Development of the Moral Ideas*, Chapter VI.

evolved, historically, by objectification of feelings. But none the less, he will maintain, when evolved they *are* valid. But now we remind him of their variability, their correlation with social demands. Actual moral judgements, en masse, cannot be valid, since they are mutually contradictory: in fact all the evidence suggests that not only are moral judgements derived from feelings, but there are no objective moral facts: the feelings are *all* that exists. We may now legitimately be influenced by the "queerness" of the alleged moral facts, their striking differences from most of the other objects of knowledge and belief. But we must not be over-emphatic. We have only attained probability. Even when our assumptions and observations are accepted it is still possible that there may be facts of the forms "this act is right", "this activity or state of affairs is good", though our recognition of them is very much confused by desires and approvals. We have seen that a great deal of so-called moral judging is really the objectifying of feelings, but perhaps not all of it is. (This leaves the field open for a positive system of ethics like that upheld by Anderson.) But this concession will give the moralist no pleasure when we add that we can show, by a different line of argument, that that part of morals to which moralists are most devoted, which is absolutely essential to their purpose, is certainly not objectively valid, and is therefore to be explained in terms of objectification. I mean everything connected with the notion of obligation.

The demonstration is merely a re-enactment of the drama in which moral thinkers of opposing schools have shown that both determinism and indeterminism are absolutely required by (and may be deduced from) our common views about obligation. We begin with the principle that "ought implies can". It is obvious that if we meet someone who is clearly not in a fit state to be wandering about the streets and say to him "you ought to go home" we are assuming that it is physically possible for him to go home, if he wants to. This kind of freedom no one will deny. But suppose that we know that he has a strong and inflexible determination not to go

home, and in fact are certain that he will not go, can we still say that he ought to go? Not, I think, in the full sense of "ought". We may feel regretfully that it is a pity, that going home is the act that would have produced most good, or something like that, but we no longer say he ought to go. (I have seen it suggested that the phrase "he ought not to have done it" shows that we do not restrict obligation to what is undetermined, since we speak of a present obligation about a past act. But this phrase results merely from the perversity of the English language, and we should be speaking more accurately, as well as translating more literally the learned tongues, if we said "he didn't ought to do it". It is then clear that the alleged obligation existed before the act was performed, when it might still be regarded as undetermined.) In the case described, we should probably change our ground, and say that he ought to want to go, or that, given his present unreasonably obstinate nature, he ought to set himself to change it. (We may, of course, go back in time to a point at which the determination began, saying, for example, that now the man is drunk we cannot expect him to do anything but what he does, but he ought not to have started drinking. But we cannot go back indefinitely; we must fix on a moment at which the man might have acted in either of two opposite ways, and if the way in which he acted was determined by his character and circumstances, we must say that he ought not to have this character, or rather, since this is at present an inescapable fact, that he ought to set about reforming himself.) That is to say, if we assume that motives and circumstances fully determine action, we shift the obligation from the external act to its motives. In doing this, we assume that motives themselves are not determined, for clearly we cannot both say "it is right that the man should have such motives" and realise that it was inevitable that he should have them, or should not have them, whichever happens to be true. Now in fact our common practical judgement is that human actions, like physical events, follow discoverable laws: this is only an

inductive conclusion, but a well-supported one; in fact we are in the habit of tracing even how men's motives are produced by circumstances and by previous practices: we regard the "empirical self" as determined and postulate behind it a metaphysical self which is a true originator of action, to be the subject of moral judgements. This is indicated when we say "you ought to set about improving your character" for if it was the empirical self we were speaking of, it would *be* that character, though admittedly if one part of the character were already good it might set about reforming the rest. If we then start to regard the metaphysical self as determined, we must postulate a third self, and so on. When we say "you *ought* to go home" we imply that at some level in the series of selves a process which would determine the going home may or may not arise: this is a genuine origination of motion, not determined by anything else. An ultimate freedom, in this sense, is absolutely required for the full meaning of obligation: to see this we need only meditate on the common use of "ought". Now it may be argued that we are not absolutely certain that such freedom does not exist.

But now we turn to the other group of speakers. Even if such freedom did exist, it would be useless for morals. We say not only "you *ought* to go home" but also "*you* ought to go home". We ascribe the obligation to a person, and hold him responsible for acting or failing to act. From this point of view, we are not satisfied with a process that "just happens", which begins or does not begin by pure chance. The action must belong to the person, and this may be accounted for in either of two ways. There may be a self, an entity with some determinate character (which may be unknowable, but that does not matter) such that given that character the process "~~flows~~ from it" inevitably: but this contradicts the previous requirement, that the action should be possible but not inevitable, and we are faced with an infinite regress, at no point in which can we stop and say "you (meaning a determinate character) ought to (implying can) go home". Alternatively the process may not "flow from" a self, but may be



one of a group of originations of motion which together make up a self; the action belongs to the person as part to whole. Then either the different originations that occur as time passes are quite independent of one another, so that any one may be different and the rest unchanged—in which case there is no unity of the self, no real “you” to be held responsible—or else they exhibit a more or less unified character, and follow some kind of determinate law or mode of reaction to external stimulus, and again they are not true originations, but each one, given the rest, could not have occurred in any other way. In all this discussion there is no need for the determination to be causal or “mechanical”: the argument may be applied to any form of determination that is postulated. Nor is it of any use to mix them, to suggest that we deny one kind of determination in our notion of obligation and assert another in our notion of responsibility. The *kind* of determination does not matter: the essential point, which our common notions both affirm and deny, is that the act is determined, that given the self and the circumstances, the act just will occur. The notion of obligation thus implies both freedom, and, through responsibility, which is a vital part of the notion, the negation of freedom, and cannot be objectively valid. We may wonder how it can even persist as a feeling; but it is easy not to attend to all aspects of the notion at once, and in any case we may well go on wanting what we know to be unattainable, we may regret what is past repair, whereas we cannot maintain as objective fact that these things ought or ought not to be. This demonstration leaves it possible that obligation, in an attenuated sense, may exist objectively. If we reject determinism, we may hold that certain events ought to happen, but it will be purely a matter of chance whether they do or not: it is nobody’s business to bring them about. I am afraid that this concession will not satisfy the moralists, and that anyone who comes as far as this with us will abandon obligation altogether. But it should be noted as a logical possibility.

We may now sum up the progress that we have made. We have discovered how we can state the traditional view of moral sceptics without logical contradiction or denial of the observable facts of moral thinking, by saying that we have only moral feelings, but objectify these and think we are recognising objective facts and qualities. But we were not sure how much of our moral thought was made up of these objectifications, whether there might not be, say, an objective quality of goodness, with which these objectifications have been confused. We have shown that obligation, as we commonly use the term, cannot be an objective fact, but our notion of it must be derived from objectification. The same is true of everything necessarily connected with it, the terms "should", "duty", and "right". Exhortation and recommendation can have no absolute validity when obligation is removed: we can only advise people how to attain what they already desire. With these we place those notions that bear plainly the marks of the process of objectification or of their emotional origin: the notion of value, the notion that goodness, if there is such an objective quality, has any necessary relation to desire, or to happiness and pleasure, since it is through desire that it is connected with these. Also, if there is such a quality, it will be such that we can recognise it without feeling impelled to approve of it or to pursue it. In fact, without going into further detail we may say that there may be an objective quality which we have confused with our objectifications of moral feelings, but if so it has few of the relations and other features that we have been in the habit of associating with goodness. But in any case we have shown that the great mass of what is called moral thought is, not nonsense, but error, the imagining of objective facts and qualities of external things where there exists nothing but our feelings of desire and approval.

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## EMOTION AND POETRY.

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By DUNCAN HOWIE.

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It is generally recognised that poetry is somehow related to emotion. The impulse to write poetry arises from some kind of emotional need and the satisfaction from reading poetry is in some sort an emotional satisfaction. This is obvious enough and scarcely warrants lengthy argumentation. Yet, though it is hardly possible to read a discussion on the basis of poetry whether by poet or by critic without coming across the word emotion repeated almost *ad nauseam*, despite a wealth of interesting suggestions the particular connection between poetry and emotion does not appear to have been explored in any very systematic fashion. It is by no means clear just how emotion enters into poetry. Just what is the nature of the emotional aspect of the poetic impulse? It is surprising, too, that psychologists have shown little interest in a problem which bears very definitely on the theory of emotion. Perhaps they show in this commendable timidity on the side of the angels where the less wise, such as the present writer, rush in. He is, however, well aware of his temerity and fully apologetic for it both to poets and to psychologists and more particularly to the poets. In plunging into a most obscure realm of inquiry, the nature of the æsthetic, he is conscious that he has little equipment of trained knowledge of poetry beyond a strong but somewhat sporadically indulged interest; as a psychologist he knows the present unsettled and controversial theory of emotion can give no very sure starting point for the venture of discussing the relationship between poetry and emotion. There is danger that the upshot may be the relating of a mystery to an

uncertainty. For all that, the problem is of interest and there may be something of merit in the suggestions to be offered. In this very tentative and incomplete approach I shall first briefly survey the relevant psychological theory, next consider (as illustrating the connection between poetry and emotion) an interesting parallel between poetic techniques and the mechanisms of primitive thinking, and finally attempt to formulate a theory of the function of poetry as a means of dealing with emotional material.

## I.

We owe to the James-Lange theory, whatever its limitations, the first reasonably definite statement of the nature of emotional experience. The theory is simply that the experience is the awareness of the sum total of the bodily changes occurring when a challenging situation throws the organism into commotion. James startles us with a paradox: ". . . we feel sorry because we cry, angry because we strike, afraid because we tremble". More formally and more accurately he summarises: ". . . the bodily changes follow directly the perception of the exciting fact, and our feeling of those changes as they occur is the emotion".<sup>1</sup> To my mind the essential value of this position is the emphasis on emotion as a kind of inner consciousness, the awareness of changes occurring within the individual, particularly those associated with vital functions necessary to survival.

It is, I think, somewhat too readily taken for granted in psycho'logical texts that various criticisms, particularly the experimental evidence of Sherrington and Cannon, have effectively negatived James's hypothesis. Though, unquestionably, later work has shown gaps and incompleteness in the formula, much of the criticism in drawing attention to errors of omission rather than of commission may be viewed as complementary rather than completely contradictory. For one thing, the theory in its sensationist terms does fail to recognise the conative element, the characteristic felt tension

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<sup>1</sup> James, W., *The Principles of Psychology* (Holt), 1890, Vol. II, p. 449.



of emotion wherein bodily movements are not only felt as a jangling movement together, a commotion, but also as an impulse to do something, a movement out, an emotion. And this felt tension must, of course, have reference to the "exciting fact" whose perception occasioned the disturbance. We are not merely disturbed, we are disturbed about something. The failure to recognise the "exciting fact" as entering into and colouring the totality of experience called emotion is a grave weakness.

In this connection, Sherrington's work<sup>2</sup> is of interest. A dog whose spinal cord was so transected as to cut off from the cortex all stimuli resulting from movements of the body below the neck, yet showed characteristic displays of emotion to appropriate stimuli. The experiment in itself cannot be cited to disprove the importance of awareness of bodily changes as a constituent of emotional experience. Sherrington has demonstrated that the dog in absence of awareness of such changes expressed emotion, but the experiment cannot tell us just what peculiar quality of consciousness the dog experienced. Marañón's experiment cited by Cannon<sup>3</sup> is pertinent. Human subjects injected with adrenalin, which produced in them the internal changes usually associated with emotion, did not report a full blooded emotional experience, but rather a kind of as-if feeling, a shadowy possibility of emotion. Thus, in the absence of a suitable occasion of emotion there was no full emotional experience. Cannon further has clearly shown that the internal bodily changes in emotional states as varied as fear, hunger, pain and rage are remarkably alike, whereas the subjective experiences are, of course, markedly different.

If Sherrington's dog was able to show emotion with presumably only awareness of an occasion of emotion and with no awareness of internal bodily changes, and if Cannon's human subjects with awareness of internal bodily changes but no awareness of an emotive circumstance could report only a

<sup>2</sup> Sherrington, C. S., *The Integrative Action of the Nervous System*, Yale University, 1906, pp. 259-262.

<sup>3</sup> Cannon, W. B., *Bodily Changes in Pain, Hunger, Fear and Rage* (Appleton Century), 1929, pp. 355-357.

possibility of emotion, and if the variability in physiological patterns is inadequate to account for the subjective variety, the implication is clear: consciousness of "bodily changes as they occur" in absence of reference to the "exciting fact" cannot give the characteristic totality of emotional experience. Consciousness is after all a function of the cortex which is continually under excitation by stimuli both from within and from without the body and the function of the cortex is the adjustment of conditions of internal stimulation to conditions of external stimulation. What the James-Lange theory has done is to emphasise the awareness of internal stimuli but to neglect the reference of such awareness to external conditions. This is to treat emotion as mere experience without sense of adjustive direction. Nevertheless, the emphasis on awareness of vital internal energies remains, I believe, an important aspect of the subjective quality of emotion, which, as I shall try to show subsequently, has important bearing on the psychology of poetry, though it must be recognised that overemphasised internalism can be a source of confusion in the attempt to understand either emotion or poetry. In fact there is good ground for believing that it is the external reference to precipitating circumstance that specifies emotion as something more than vague disturbance. Sherman<sup>4</sup> investigated the degree of agreement in judges' naming of emotions as presented in motion-pictures of experimentally obtained situations. He so varied the presentation as to isolate various aspects of the situation and concluded that knowledge of the inducing condition was the major factor in identifying emotion. This evidence from external observation suggests that in the individual's specialisation of his awareness of his own emotions he follows a similar line. Further support for this suggestion may be found in Bridges'<sup>5</sup> study of emotions in young children. She supports convincingly a hypothesis that the different

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<sup>4</sup> Sherman, M. The differentiation of emotional responses in infants (I, Judgment of emotional responses from motion picture views and from actual observation; II, The ability of observers to judge the emotional characteristics of the crying of infants, and of the voice of an adult), *J. Comp. Psychol.*, 1927, Vol. 7, pp. 265-284 and 335-351.

<sup>5</sup> Bridges, K. M. B., A genetic theory of emotion, *J. Genetic Psychol.*, 1930, Vol. 7, pp. 514-527.

specific emotions, rage, fear, anxiety, jealousy, etc., emerge, with growth of the individual, from a general, diffuse, relatively undifferentiated state of excitement. Her survey of the development at various age levels does strongly suggest that the special quality of particular emotional states is a function of the child's developing awareness of external conditions and of his own needs and impulses in regard to them.

This external reference of emotion as the condition under which it becomes articulate is a point of some importance. There is too much a tendency to set off emotion in complete contradistinction to thought, to treat the one as exclusively subjective in reference, the other as exclusively objective. The distinction may be right enough so long as we treat it as one of degree. In the more purely cognitive aspects of experience the emphasis is on knowing the object; in the more purely emotional states, the emphasis is on the awareness of the object's effects on us. McDougall's<sup>6</sup> qualified statement is, I think, true: "They (i.e., the emotions) signify to us primarily not the nature of things but rather the nature of our impulsive reactions to things; they are the cognitive basis of self-knowledge and self-control". It is because the James-Lange theory puts the emphasis where it should be, on the awareness of vital urgencies that in spite of criticism it retains an essential core of truth. But such urgencies must remain without form and void till articulated in terms of objective reference. This, too, is an important consideration for the understanding of the part played by emotion in poetry.

On the side of function Cannon makes a notable contribution to the theory of emotion. He argues that the thalamus acts as a co-ordinating centre for the impulses arising from internal bodily changes associated with emotion. The thalamus may be viewed as a primitive brain concerned not with the niceties of cortical discrimination but with the overall requirements of the basic business of survival. As relayed through thalamus to cortex, the material for emotional consciousness is thus not the mere mass of bodily changes

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<sup>6</sup> McDougall, W., *Outline of Psychology* (Methuen), 1923, p. 326.

which James stresses, but such changes as co-ordinated at the thalamus to meet a threatening or demanding situation. Further, from his studies of the activities of the sympathetic branch of the autonomic nervous system in conjunction with the effects from the secretion of adrenin, Cannon was led to view the function of emotion as that of rapidly mobilising energies to meet an emergency situation; as in war time the nation's resources are concentrated to meet the threat to national survival and peace time needs and projects must be neglected. In this emergency theory we have a more definite lead to the motivational, energising aspect of emotion. In the life of the individual, as of the nations, there are times when long term planning must give way to temporary expediency, when the delay of thought must yield to the press of action, when higher level discrimination with its specialised technique of taking one thing at a time must be brushed aside by primitive impulse in its demand for all-over control of the organism. The Cockney Sunday-school boy asked to explain the biblical terms sums it up: "The quick is those as gets out of the way of motor cars; the dead is those as don't".

The emphasis on emergency reaction with its necessary disruption of organised trains of thought and activity may easily lead to a view of emotion as a primitive mechanism having at best a limited usefulness in primitive situations (even with motor cars you should look before you leap), but in the complexity of civilised life more a hindrance than a help, in fact often pathological as a regression from the intelligent and mature to the instinctive and infantile. A line of thought of this kind is so impressed with the disruptive, with the destructive and wasteful aspects of intense emotion that it fails to take into account the positive value of the energising effect of emotion which has not run to excess. The "quick" are responsive to the rich changeableness and variety of life, the "dead" are confined in their stereotypes.

In an interesting contribution Stratton<sup>7</sup> describes the experience of a young aviator in training during the First

<sup>7</sup> Stratton, G. M. An experience during danger and the wider functions of emotion. In *Problems of Personality, Studies in Honour of Dr. Morton Prince*, 1925, pp. 47-62.



World War whose plane had fallen into a tail spin. The interesting feature of the young aviator's report is that, while he was quite skilfully and methodically carrying out the measures necessary to get his plane under control, he experienced a marked dissociation; while one aspect of his mind was constructively meeting the situation, another was reliving vividly "more events of my life than I can well enumerate . . . in orderly sequence, very distinct, and I cannot recall that anything was out of place". These included recollections from when he was three years old, seven years old, eleven years old, and just prior to entering the service. This experience which can be paralleled by others<sup>8</sup> indicates that in an emergency situation the individual may be stirred not only to swift adaptive action but also to a lightning chain of thought. Stratton's interpretation is that emotion is dissociative, a switch-over which, necessarily in meeting a new challenge, is disruptive of preceding systems of activity. This disruption is not only the demand that one must stop what one is doing in order to do something different, it is also the tense spread of activities throughout one's being that from the widespread activation may emerge possibilities of meeting the new situation. "The emotional seizure is thus an intricate and sudden reorganisation of all our powers, both motor-impulsive and cognitive, in order to meet a situation fateful to our interests."<sup>9</sup> Now it is just the awareness of this sudden "reorganisation of all our powers", this jangling of the many strings of our being into life, that gives the freshness and thrill of emotion as against the limited segmental tensions of concentrated skills, the boredom of routine or the "intolerable fatigue" of specialised thought. It may be regression from conditions of particularised efficiency, but it is also refreshment in the felt intensity and extensity of living. I believe that it is a large part of the function of poetry to so refresh us.

<sup>8</sup> See, for instance, Harriet Martineau's report on the experience of Rear-Admiral Sir Francis Beaumont which appears to be the origin of the popular legend that a drowning man reviews his whole past life before going down for the third time.

Cited in Swift, E. J., *Psychology and the Day's Work* (Scribner's), 1926, pp. 205-206.

<sup>9</sup> Loc cit. p. 60.

To sum up this section: emotion occurs as an aspect of primitive response. Its occasion is the challenge of a novel or emergency situation and it may be viewed as an abrupt transition from existing specialised routine involving a redistribution of energies to meet changed conditions. It is thus a characteristically tense and diffusive system related to organic needs. Subjectively it is to be viewed as a state of heightened activity of the whole organism, a felt urgency of life which has special reference to the awareness of vital processes. Such inner awareness is not, however, to be divorced from its external reference to the precipitating conditions, without which the emotional consciousness would be reduced to an inchoate unease, an undifferentiated excitement.

## II.

The kinship of poetry and emotion is nicely evidenced in the parallel between poetic techniques and Freud's<sup>10</sup> mechanisms of the dream-work, for the problem of dream-work and poem-work appears the same, the need to find a satisfactory form of expression for emotional urgency. It is by the dream-work that the latent content of the dream (its primary biological meaning) under the constraints of the conscious aspect of the individual, the ego, becomes translated into the manifest content, the form in which the dream material becomes conscious. There is, thus, a marked resemblance between this dream-work and poem-work, the technique whereby the private experience of the poet is given communicable and memorable form. Freud lists five mechanisms of the dream-work—condensation, the fusion of material often diverse and frequently contradictory into one image; displacement, the shift of psychic emphasis from what is the primitive intention of the dream to some substitute, related or associated object; dramatisation, the expression in terms of concrete imagery in place of the abstractions of higher thought processes; symbolism, the image pointing beyond itself to something other than its own awareness; and secondary elaboration.

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<sup>10</sup> Freud, S. *The Interpretation of Dreams* (Allen & Unwin), 1913.

tion, the ordering of the material which, because of the preceding mechanisms, is often apparently meaningless, inchoate and bizarre to give it a surface coherency or secondary meaning which, however, differs from its essential biological direction.

Detailed analysis and citation of examples is hardly necessary to show the similarity of these mechanisms to poetic techniques. A few illustrations should suffice. Condensation in fusion is instanced in the compression of poetic thought, the supercharging of the word or phrase so that it carries a richness of implication, a penumbra of subtle suggestion far beyond that expected from work-a-day words in their business of factual communication. It is not just the apt word, the *mot juste*, "what oft was thought but ne'er so well expressed", which makes unforgettable the great lines of the masters; it is among other things the energising word which like an emotive stimulus marshals our psychic forces to meet it. Displacement too, the subtle shift of psychic emphasis, appears equally an element in the joy of poetry; it is the core of metaphor, the heart of poetic suggestion, and appears to me to be behind the symbolists' elaboration of the symbolism of the symbol in the distillation of subtilised hints of experience. It is largely because of success or failure in transmitting displacement that Wordsworth speaks with two voices:

"Two voices are there: one is of the deep.

It learns the storm clouds' thund'rous melody . . .

And one is of an old half-witted sheep  
That bleats articulate monotony."

And this displacement in poetry goes down to the felt abrupt transition and diffusive excitement of emotional experience.

Again, there is little need to dwell on dramatisation as a keynote of poetry. The quest of the poet is for adequate concrete embodiment of his experience without which, whatever else they may be, the most ingenious verbal patterns lacking the emotive power of the concrete situation, are not poetry. This concrete expression, expression in the mass and in the depth of imagery as against the tenuous flatness of

abstraction, is necessarily in some degree symbolic because its value lies not in the presentation of the object exclusively for itself, but diffusely for all that it may stand for, all that it may evoke. Keats saw upon the "night's starred face" the reflection of his own poetry, "huge cloudy symbols of a high romance". For Yeats symbolism was the magic of poetry: "Whatever the passions of men have gathered about becomes a symbol in the great memory and in the hands of him that has the secret it is a worker of wonders, a caller up of angels and devils."<sup>11</sup>

As for secondary elaboration, a complex form of displacement, this has a clear bearing on the structuration of emotional material which the poet effects. For example, Eliot's "Waste Land" at first reading may appear to be a series of vivid, but somewhat disconnected and not always fully intelligible, snapshot impressions of the futility and drabness of modern life. It is only on more careful re-reading that one appreciates something of the subtle counter-point of recurrent themes, the skilled patterning of moods which constitute the secondary elaboration of the poem. The reason that great masterpieces never stale may be because they involve not secondary elaboration only but also elaboration at further removes, tertiary and so forth, that gives the poem as a whole that quality of compressed implicativeness which was noted in discussing condensation.<sup>12</sup>

Enough has perhaps been said to indicate the close parallel between the poet's ordering of his material and the primitive thought mechanism through which organic tensional systems find consciousness. This parallel is not, of course, to be taken as implying that poetic thinking is itself either primitive or simple. On the contrary, compared with dream thinking, even the most naive poetry is highly sophisticated, if only in this, that it involves the working over of emotional material

<sup>11</sup> Yeats, W. B., Essay on "Magic", in *Ideas of Good and Evil* (1903); cited by Spender, S., *The Destructive Element* (Jonathan Cape), 1938, p. 125.

<sup>12</sup> For clarity in statement of the parallel, Freud's mechanisms have been discussed as if they were separate and distinct processes. They may, however, be deduced from the essential principle of the first, condensation or fusion. Similarly the various poetical techniques and devices referred to may be seen as subserving a common function in effecting a concentrated focus of feeling.



not merely for the private enjoyment of the ego but for public communication. Nor is the parallel urged as supporting an interpretation of poetry in the way that Freud interprets the dream. For Freud, of course, the mechanisms of the dream-work are forms of distortion or disguise which repressed libidinal tendencies must needs take to secure acceptance by a conscious ego which would repudiate them in their crude form. Such interpretations of poetry have, of course, been offered and we should today be past the stage of rejecting them on the grounds of squeamishness. It is, perhaps, not too much to hope also that we should be past the stage of accepting them with that enthusiasm of over-reaction which lies in the intense attractiveness of the repulsive. It is not, however, possible within the scope of this paper to appraise the worth and limitation of the Freudian doctrine. Whatever modifications it may undergo, its central truth, the dependence of the most highly elaborate psychic processes on the primal organic needs, will remain. Nor can there be any question as to the importance of the sex drive, at any rate within our particular civilisation. But the facile reduction of all to sex has about it a certain tediousness, something of the banal, not infrequently a suggestion of the ridiculous. For example, to relate poetic rhythm to the deep-seated rhythms of vital processes, sexual impulse, circulation, breathing, digestion, fluctuations of attention, fatigue, etc., may be of value in stressing the intimate kinship of poetry and emotion, the rootedness of poetry in life; but to go all the way with a thorough-going Freudian<sup>13</sup> and interpret poetic rhythm as the disguised fulfilment of the wish for coitus is not only something of a joke but also, as the nullification of all variety in one universal principle, particularly unconvincing—presumably the organic rhythms themselves are reduced to disguised expressions of coitus. It is just this completely reductive approach, this denial of all positive variety and richness of being in a comprehensive nothing-but that constitutes the objection to the Freudian theory. The denial of differences in an absolute

<sup>13</sup> Rinaker, C., Some unconscious factors in the sonnet as a poetic form, *Inter. J. of Psychoanalysis*, 1931, Vol. XII, 2, pp. 167-187.

intrinsically undifferentiated and undifferentiable<sup>14</sup> amounts to viewing the rich variety of life as the meaningless activity of a cornered rat in a maze, a maze in which there is only a phantasy food-box and whose alleys (all blind) are in Freud's words stages in the "long detour to death". If one may be forgiven the unforgivable misquotation, this is:

Annihilating all that's made  
To an id urge in an id shade.

But Freud's interpretation may be rejected yet the parallel between dream-work and poem-work remain. The mechanisms need not be viewed as always necessarily subterfuges and evasions, though they no doubt involve distortion if re-organisation and re-arrangement are to be called distortion. These mechanisms may be seen as the conditions which the conscious ego imposes on the organic material, the conditions which it must impose upon them if they are to fit into the pattern of conscious experience involving awareness of the basic drives in their relation to external pressures and to the structure of the organised self. In the survey of psychological theory I have argued that a purely internal view of emotion is inadequate. Elsewhere I have tried to show that the limitations of Freudian theory arise from just such an internalism.<sup>15</sup> Organic process to yield the rich variety and articulation of experience must be ordered in relation to the external conditions which occasion it, and this, according to Freud<sup>16</sup> is just what the ego does, though in terms of his thorough-going internalism he cannot concede that such shaping and patterning can permanently alter the id, which remains unchanging because he has sealed it off from the possibility of change. If, however, we reject the reductivist aspect of Freud's interpretation, we can see the dream-work and poem-work as essentially kin; both involve mechanisms whereby the inner conditions of experience are to be communicated in "significant form",

<sup>14</sup> "If we may assume as an experience admitting of no exceptions that everything living dies from causes within itself and returns to the inorganic, we can only say 'The goal of life is death' . . ." (Freud, *Beyond the Pleasure Principle*, p. 47).

<sup>15</sup> Howie, D., Internalising the external; an approach to a psychological theory of the self, this Journal, December, 1945.

<sup>16</sup> Freud S., *The Ego and the Id* (Hogarth), 1927.

and with regard to poetry, the parallel is an impressive reminder that, however elaborate or sophisticated the form, and however enlightened the significance, that which is ordered lies deep in the primal needs of life.

### III.

At this stage the argument is simply that the poet deals with emotional material for which he seeks significant form. The question now arises, Why should he? What is the motivational system that drives the poet to write poetry?

The fact that emotion is a state of tension demanding release suggests a simple function of the poetic impulse as emotional discharge.

"A timely utterance gave that thought relief  
And I again am strong."

In so far as an emotional element enters into poetry there can be no question that there is an aspect of release about it. The very business of ordering emotional material to significant form must involve a degree of relief from its insistent pressure; the intense concentration on the object or on the absolute of beauty must afford a degree of escape from the ill ease of present experience; and the flight into the realm of fancy is certainly one way of avoiding the constraints of the actual. In fact Keats recommends it as preferable to alcohol:

"Not charioted by Bacchus and his pards  
But on the viewless wings of poetry."

It is easy to make a case for poetry as a device for emotional release fundamentally escapist. But this again is to blur differences in the fog of nothing-but, to lump poetry together with violent activity, hysteria, smashing the furniture, swearing, or kicking the cat. There is a variety of ways of finding relief from emotional tension and poetry as one particular mode of relief has its own characteristics which warrant examination.

The fact that this particular mode of relief takes the form of a special kind of verbal expression seems to me to imply at least two things: an attempt to fix the experience and an attempt to communicate it, for this is the twofold function

of language, in naming the event to pin it down for record and through the use of names to point out the event to others. From the side of the poet's concern with his own experience, verbalisation as conscious specification enables a degree of control of the emotional event. Because of this he is able to relate it to other aspects of his experience or to recall it in circumstances of his own choosing. As a form of "repetition compulsion" which Freud<sup>17</sup> emphasises as the mastery motive in play, the recall of the experience through verbalising is itself a satisfaction. But so far as he is able to recall it in conditions of his own choosing there is for a poet the further satisfaction of reliving voluntarily that which originally was forced upon him so that poetry "in its simpler forms enshrines some effort to reproduce a vivid experience flashed out among the necessities of our daily life. But the secret of art lies in its freedom. The emotion and some elements of the experience itself are lived again divorced from their necessity. The strain is over but the joy of intense feeling remains".<sup>18</sup>

The poem, however, is not solely for the poet. The effort of putting experience into words surely involves the recognition of the primary function of words as means of transcending the privacy of experience to communication with others. The attempt to express experience implies the urge to communicate and share it, behind which lies a need of the kind McDougall describes as active sympathy. He argues that the biological factor which makes possible the maintenance of animal groups is *passive* sympathy, or the sympathetic induction of emotion: "the experiencing of any feeling or emotion when and because we observe in other persons or creatures the expression of that feeling or emotion". Allied to the gregarious propensity this becomes *active* sympathy: "The blind impulse of the gregarious animal to seek his fellows whenever one of his other instincts is aroused, becomes in us the desire of seeing ourselves surrounded by others who share

<sup>17</sup> Freud, S., *Beyond the Pleasure Principle* (Hogarth), 1922, pp. 11-16.

<sup>18</sup> Whitehead, A. N., *Adventures of Ideas* (Cambridge University), 1943; p. 349.

<sup>19</sup> McDougall, W., *An Introduction to Social Psychology* (Methuen), 28th Edit., 1939, p. 79.



our emotion".<sup>20</sup> Now this appears to me to get to grips with the problem of why poets write poetry. Emotion in James' emphasis of felt urgent living demands expression and as members one of another we are so constituted that we desire to have others join with us in that urgent living. By temperament and training peculiarly sensitive, the poet's need for such communion is likely to be a more insistent demand. One reading of the history of poetry and of the poets, and this appears strikingly true of recent history, sees the poet as in some or other degree at odds with his time and sees the poetry as an effort to break through his inevitable loneliness, to assert his fellowship in joy or to escape his solitariness in sorrow. This may be an over-statement. The need for shared experience is not the whole story of the poetic impulse, perhaps not even a chapter, but it is, I believe, a relevant paragraph. It is, of course, necessary to recognise that the experience as not merely expressed but shared must elicit the reader's participation. There is too much poetry which failing to go beyond a strident or petulant demand on our sympathies deserves a T. E. Hulme's<sup>21</sup> scorn: "I object to the sloppiness that does not consider a poem is a poem unless it is moaning or whining about something or other"—the kind of poetry that deserves crooning.

The poem must so transmit the experience as to evoke the shock and gasp of emotion, appear in some degree an emergency situation calling on a startled re-organisation of energies which breaks through set and routine to meet the challenge of the new. This is the startle of the right word in the unexpected context, e.g.:

"Poem may be as cold  
And passionate as the dawn"

(Yeats, "The Fisherman");

it is the sudden illumination of the familiar as in:

". . . . . I peel  
And portion a tangerine and spit the pips and feel  
The drunkenness of things being various"

(Macniece, "Snow");

<sup>20</sup> Op cit., p. 147.

<sup>21</sup> Hulme, T. E., *Speculations* (Kegan Paul); cited in Bullough, G., *The Trend of Modern Poetry* (Oliver and Boyd), 1941, p. 66.

or more stridently, it may be the abrupt juxtaposition of the unexpected and literally the shocking so dear to the moderns, and perhaps justifiably so, as necessary shock therapy to break the catatonic stupor of our schizophrenic age—an example:

"Midnight shakes the memory  
As a madman shakes a dead geranium"

(Eliot, "Waste Land").

The forms vary and literary taste changes but there remains a necessary element in poetry the stabbing of the spirit wide awake so that the reader joins the poet in the excitement of experience and in the resonant awareness of emotion, though it may be a pricking rather than a stabbing, and though the excitement may be mild and the resonance gentle, knows: I feel, I am alive. Nor is this mere titillation or startle (some poems do rather tickle us or say "Boo!"); poetry in some degree presents the charm of the multiple possibilities of life: "All great poetry is new, it comes as a surprise, as something to make a man catch his breath to think he has seen these things all along and yet has never really seen them . . . Poetry is that by which we live for ever and ever unjaded".<sup>22</sup>

The poet seeks emotional release and emotional communication, but he seeks that release and that communication in a form which gives intensified experience, life and life lived more vividly. The poem is an affirmation and an evocation of life.

I hold this to be true of the poet even in his most pessimistic longing for death. Like Keats he is but "half in love with easeful death", and it is to be remembered that the famous Ode ends in a nice tension, "Was it a vision . . . Do I wake or sleep?"—for felt tension is emotion, the clamant awareness of life. Nor is it over subtle psychologising to describe the notable concern of poets with death themes as an ambivalence of the need for life, the heightened sense of possession which comes from contemplation of loss.

There is naturally diversity in the affirmations offered. Poets are many and varied, their temperaments, their

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<sup>22</sup> From a letter of Robert Frost; cited in Coffin, R. P. T., *New Poetry of New England* (Johns Hopkins), 1938, p. 74.

histories, their circumstances, their talents and their natures are legion. So there is no one life and there is no one poetry. The æsthete calls on us to revitalise ourselves in the enjoyment of sensation or sensibility for its own sake: "While all melts under our feet, we may well grasp at any exquisite passion, or any contribution to knowledge, that seems by a lifted horizon to set the spirit free for a moment, or any stirring of the senses . . ." <sup>23</sup>

The vatic, the moralistic or the propagandist call us to repentance and to participation in the building or the restoring of a world fit for the sensitive to live in. The dadaists offer our faded spirits refreshment in the primal but murky wells of the unconscious, and the imagists in horror of the sloppy formlessness of emotionalism command us to the fine tension of life in the immediate, concentrated, clear-cut awareness of the object. The solicitations are many but through all, as I see it, runs an effort at some degree of revitalised consciousness, a new and more intense awareness, the sense of clamant, manifold life, without which poetic devices become clever tricks and poetic content platitude or perversity.

The emphasis on emotional communication unless it has within it that which leads beyond it would imply an extreme of romanticism or subjectivism. It has already been sufficiently stressed that a view of emotion restricted to consciousness of internal changes cannot explain emotion. We are not just angry or afraid, we are angry or afraid about something. The emotional experience is directed and referent, and the sense of that direction and reference enters into the total complex of consciousness to give it its peculiar flavour. So the poetic impulse would remain amorphous and inarticulate if it were no more than the release of emotion or the stimulus to emotion. As more than evocative, as significant, poetry must have content and form—in fact without some content and form, i.e., a degree of objective reference, it could not be either evocative or communicable. But this form and significance is not the kind of form and significance of logical

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<sup>23</sup> Pater, W., *The Renaissance* (Macmillan), 1924, p. 250.

theory, nor is the objective reference the objective reference of science. It is the logic of science that it is concerned with the nature of the object in its relationship with other objects, and this is the way of understanding, the awareness of objective conditions in their own right, which is necessary if we are to adjust to objects as other than ourselves. It is the logic of poetry that it is concerned with the object only in so far as it is a focus of feeling, and this is the way of enjoyment, the incorporation of objective conditions in a prehension of feeling, the empathic identification with the object as significant for experience, which is necessary if we are to adjust to ourselves as other than objects.

It is through this patterning of emotional possibilities in terms of their objective reference that our very selfhood arises as a centre of organised experience, the intricate system of demand values which within the limits of the objective actual makes us know as we know, feel as we feel and do as we do. This is what McDougall<sup>24</sup> describes in his theory of the organisation of instinctive impulses through the development and integration of sentiments, the sentiment being defined as "an enduring affective attitude towards an object". And this is the fundamentally similar line taken by Freud in his treatment of the rise of the conscious psychic constructs through ego mediation between blind id pressures and environmental constraints. It is in something of the same fashion that the poet's ordering of his emotional material to significant form constitutes an effort to realise a selfhood for the poem in the focus of a rich unity of being.

Here, for example, is a recognition of selfhood forced onwards to new complexities and seeking an incorporation of materials that it may realise its own enjoyment:

"These fragments I have shored against my ruins  
Because I cannot hope to turn again,  
Consequently I rejoice, having to construct  
Something upon which to rejoice."

(Eliot, "The Waste Land").

Again, here is a statement of the fluid self developing within the accidents of environment yet maintaining its own organic

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<sup>24</sup> McDougall, W., *op cit.*



order and affording a principle of conscious identity amid the flux of circumstance:

"It should be of the pleasure of a poem itself to tell how it can. The figure a poem makes. It begins in delight and ends in wisdom. The figure is the same as for love. No one can really hold that the ecstasy should be static and stand still in one place. It begins in delight, it inclines to the impulse, it assumes direction with the first line laid down, it runs a course of lucky events, and ends in a clarification of life—not necessarily a great clarification, such as sects and cults are founded on, but in a momentary stay against confusion."<sup>25</sup>

And finally, here is a description by Wordsworth of the process of poetic composition which, allowing for poetical language on the one hand and with some pruning of the more esoteric Freudian emphasis on the other, is a remarkable parallel to the theme of "The Ego and the Id":

Visionary power

Attends the motions of the viewless winds,  
Embodied in the mystery of words:  
There darkness makes abode, and all the host  
Of shadowy things work endless changes—there  
As in a mansion like their proper home,  
Even forms and substances are circumfused  
By that transparent veil with light divine  
And, through the turnings intricate of verse,  
Present themselves as objects recognised,  
In flashes, and with glory not their own."

(Wordsworth, "Prelude", V, 595 ff.)

The dim shadowy things of life-impulse rise from darkness through the mystery of words (for Freud as for Watson the unconscious is the unverbaised) and therein find "a local habitation and a name"; and, brought into a focus of feeling through the intricate turnings of verse, even external things, forms and substances are recognised, because ordered into a significant awareness, with a glory not their own, so that the poet having to organise the formless raw material of emotion can rejoice in having to construct something upon which to rejoice, and as participant in that creation, the reader can rejoice with him. It is in this that the poets are actually

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<sup>25</sup> Frost, Robert, *Preface to Collected Poems*, 1939.

as well as etymologically the makers. At its best, the poem is not reducible to verbal expression that gives emotional release, though this is a not unimportant element in the poetic impulse; nor is the finest poetry solely the communication of emotion in the affirmation of a fellowship of intensified experience, though this is important, too, and there is much poetry justified of itself which reaches no farther; over and above all in the final magic of poetry there is a creative unity, a selfhood of experience which, entrapping in its net of words a moment of self-actualising in the synthesis of awareness, is "a clarification of life" and "a stay against confusion".

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## REVIEWS.

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SOCIETY AND NATURE—A SOCIOLOGICAL INQUIRY. By Hans Kelsen. International Library of Sociology and Social Reconstruction. London: Kegan Paul. 1946. Pp. 391. Australian price: £1 13s. 3d.

Kelsen's purpose in this work is to trace the development of the notion of causality from a primitive, normative, way of thinking. He regards society as the domain of normative thinking, and nature as the domain of causal thinking. "The same elements, connected with each other according to the principle of causality, constitute nature; connected with each other according to another, namely, a normative, principle, they constitute society." In these terms his thesis is that for primitive man what we call nature is a part of society: that the two domains are gradually separated by a distinction between norms and causal laws, and that modern science, in endeavouring to discover causal laws about society, is now conceiving society as part of nature. In working out this thesis he has laid most weight on the earlier or more primitive stages in the process of development: he devotes 185 pages to the primitive conception of nature, 63 pages to Greek religion and philosophy, and only 18 pages to modern science. (The work is provided with copious notes and a full index, which together account for 125 pages.)

Kelsen argues that in primitive thought, both about what we call society and about what we call nature, the dominant idea is that of retribution, and that it is from this that our idea of causality is descended. After insisting that retribution and moral conceptions in general play a larger part in Greek Olympian religion and in the Homeric poems than some scholars have believed, and pointing to the undeniably

important place held by these conceptions in other aspects of Greek religion, Kelsen goes on to maintain that in most of the early Greek philosophers the notion of causality is inextricably entangled with social conceptions, such as love, strife, and, above all, retributive justice. He gives to the atomists, Leucippus and Democritus, the credit for "freeing the interpretation of nature from the principle of retribution" (p. 246), by stating a purely mechanical view of causation. He holds, however, that the notion of necessity is a survival, in the atomist theory, from the older view, and that this is carried over into the new natural science of Bacon, Galileo, and Kepler. Hume's criticism of necessary connection is taken, therefore, as a further step in freeing the law of causality from its mythological associations, and so are Mach's criticism of "the thesis that the effect must be equal to the cause" (p. 251) and Heisenberg's principle of indeterminacy, which substitutes statistical for rigid laws. Similarly Kelsen maintains that the argument against a sharp separation of cause and effect, the view that an effect has not one cause but many conditions, and the substitution of functional dependence for the temporal sequence of cause and effect, all aim at removing survivals of the retributive way of thinking.

Kelsen simply assumes, without argument, that the evidence of modern anthropology may be used to describe a system of "primitive thought" which is the historical predecessor and the background of Greek religion and philosophy. He insists on the strength of the survival of this primitive thought into historical times: he carries down the primitive era to the end of the fifth century B.C. In this he agrees closely with Karl Popper, who in "The Open Society and its Enemies" insists on the survival of the "tribal society" into the fifth century. Like Popper, Kelsen regards the sophists as the heroes of social theory, corresponding to the atomists as the heroes of natural science: together they established the clear distinction between norms and facts. From this follows the remarkable result that Aristotle has no place in the development of the notion of causality. He figures in this work as a



reporter of the views of others, but his four types of "cause" are not even mentioned: the line of progress runs straight from Democritus to Bacon. Correspondingly Popper regards Plato and Aristotle as merely reactionary in social theory. On the Kelsen-Popper view of history the Dark Ages begin with Plato.

One of the most challenging parts of Kelsen's work is the treatment of recent and current discussions on causality. Unfortunately he merely states his conclusions on these points, referring to arguments developed by other writers. If we are convinced by the arguments of Hume, Mach, Heisenberg, Reichenbach, Frank, and others that certain views about causality are erroneous, we may then consider Kelsen's view that these errors result from a survival of retributive thinking. One could not discuss these arguments adequately in a review of Kelsen's book without devoting more space to the criticism of some of his views than he has devoted to their statement. One point that may be made, however, is that it is a methodological error, in sociology, to explain things *simply* as survivals. Some customs, institutions, and ways of thinking survive, and some do not: in general those that survive do so because they have some continuing social function—though not necessarily their original one. When R. H. Tawney (in his Halley Stewart Lecture on Equality, p. 49) says that "the social fabric . . . contains elements . . . which, like the rudimentary organs of the human body, or the decorative appendages of the British Constitution, have survived after their function has disappeared and their meaning been forgotten" he is overstating the case. He knows quite well that these "decorative appendages" (which presumably include the monarchy and the House of Lords), though their original functions have disappeared, have acquired new functions, and that is why they survive. Similarly, if the notions of necessity, of rigid laws, of the separability of effects and causes, have survived so long after the separation of nature from society, we should look for reasons: perhaps they have some social or psychological function, or perhaps they

are appropriate to certain fields of enquiry, or perhaps some of them are just correct after all.

However, the most elaborate and important part of Kelsen's book is that in which he treats the earlier stages of the development of the idea of causality. The greater part of his thesis, that primitive man does not distinguish sharply between nature and society, that the idea of retribution plays a large part in his thinking, and that the scientific and philosophical notion of causality has been gradually separated from that of retributive justice, may be accepted without question. But many details of his treatment are open to criticism: only a few of these can be discussed in this review.

Kelsen is known mainly for his work in legal theory: he is the exponent of a "pure science of law" which considers a legal system as a consistent body of norms, each of which is valid, within that system, if it is correctly derived from the basic norm of the system. Presumably he is interested in scientific or causal laws primarily as providing a contrast to such a body of norms. No doubt he considers that an adequate logical analysis of the term "norm" has been given in his other works, but it is unfortunate that this term, and also such phrases as "the law of causality", "the idea of retribution", "the norm of retribution", are not analysed or clarified in this book. His use of these terms seems to lack precision. A norm is presumably a rule, that such and such ought to be done, and is clearly distinguished from a scientific law by the fact that a norm can be violated and remain a norm, but if a scientific law is broken, it no longer exists. But that is not the only distinction. A scientific law is just a fact: it stands by itself, so to speak. But a norm is either something demanded or something commanded or something accepted by some person or society, or it is an illusion. A group of norms may perhaps be abstracted from the situation in which they are commanded, in order that the consistency of the group may be examined, but to treat them as actually existing by themselves is an error. Primitive thought (and much modern thought too) errs in confusing the norm "such and such

ought to be done" with the fact "such and such always is done", and in treating "such and such ought to be done" as a sort of fact: a norm, considered as standing by itself, is a projected or objectified demand. But just as Popper, objectifying his own preferences, calls some norms higher, some laws better than others, so Kelsen calls some norms "valid", not only in a relative sense, within a particular normative system, but also in an absolute sense.

He says (p. 258) that even if rigid causation is not objectively true it may be valid as an "epistemological postulate", "a norm directed to human thinking". This "validity" can only mean that the postulate is *useful*, that it often leads to correct results or to the making of discoveries. But to speak of the validity of norms is confusing, it tends to preserve the illusion of their objectivity.

Then what is meant by "the idea of retribution"? Is it the desire of an injured person for revenge, or the expectation that an injured thing or person will take revenge, or the expectation that the violation of a norm will be punished, either by some visible authority or by some unknown power? Judged by his examples, Kelsen seems to treat all these as a single idea or principle. Further, what is "the norm of retribution"? Is it the last-mentioned expectation? But this is a belief in a matter of fact, a simple regularity or scientific law, not a norm at all. Kelsen rebukes T. H. Huxley (p. 259) for treating the normative laws of human society of the form "you ought not to steal" as scientific laws of the form "if a man steals, a judge will punish him", pointing out, quite rightly, that "the rules of law express motor-affective, rather than cognitive attitudes". But in speaking of retribution one cannot help asserting such scientific laws, and even primitive man does so when he says that retribution will occur. It is true that the idea of retribution, in this third sense, follows closely from the idea of a norm, because this is a rule that may be violated and is maintained by sanctions, but to speak of a "norm of retribution" is confusing. Or is "the norm of retribution" really a norm, that whoever violates

some other norm *ought* to be punished, that good *should* be returned for good and evil for evil? No doubt this way of thinking occurs (and many modern legal rules are norms of retribution in this sense) but in primitive thought, as represented by Kelsen's examples, it is rarer than the notion that retribution or repayment simply occurs. If these and similar issues were clarified by more precise analysis it would, perhaps, become plain that many sorts of facts, including causal laws, are recognised in primitive thought, though not, of course, clearly distinguished from each other or from norms. It would be more correct to say (in Kelsen's terms, as defined at the beginning of this review) that for primitive man nature and society are not distinguished than to say that nature is a part of society. In fact, it is partly because his society is so regular and so automatic in its operation, so completely governed by custom, that primitive man can confuse the laws of society with the laws of nature. But in so doing he does not believe that they are all normative laws: he believes that they are simultaneously normative and causal, they are both what is done and what ought to be done. In logical discussion we find it hard even to consider such an amalgamation, yet in colloquial speech we constantly say "it isn't done" when we mean "it is socially forbidden".

Here, and perhaps in other places too, Kelsen is led astray by his Kantianism. As his definition of "nature" and "society" shows, he regards causality, retribution, and so on as forms of thought, categories imposed by the human mind on elements which are indifferent. Causality, he says, is a cognitive category, and since the desire for pure cognition is weak among primitive men, they do not use that category. One may reply that the facts are not simply elements, but are already in some form, which even savages cannot completely ignore, and that even an emotional or practical purpose must use and may extend the knowledge of facts. The form of the scientific law, the universal proposition about sequences which simply occur, is one which thought, however primitive and however emotional, cannot avoid recognising and using.



Kelsen attempts to explain magical ceremonies very largely in terms of the principle of retribution. In this his enthusiasm for his thesis seems to carry him well beyond the evidence.

While recording many aspects of Greek thought up to the fifth century, Kelsen seems to overemphasise the constancy of its leading notions and their similarity to those of primitive thought. He sees the principle of retribution everywhere, but does not explain how one principle can manifest itself in so many different forms. While he is right in insisting that the ideas of justice and retribution occur in the Olympian religion, even in Homer's account of it, he does not insist sufficiently upon some of the differences between this and other (especially earlier) religions. In Homer the gap between gods and men of the ruling class is very small; this is the religion of a confident upper class, which makes gods in its own image and is prepared to compete with them, a class very different in outlook from the savage who will not kill an animal without asking its permission first. The gods dispense justice, as well as practising injustice, but it is a human, deliberate, conscious sort of justice, not something automatic and mysterious in its operation. This corresponds to a social change: human society is itself more consciously governed, being ruled by kings rather than by customs.

In the Ionian philosophers again, a different type of view is found. It is true that in rejecting the Olympian religion they go back, in some respects, to the earlier view: retribution is again, as a rule, automatic and non-personal (in spite of the oft-quoted Erinyes in Heraclitus!). But it is the earlier view with a difference. Whereas in primitive thought retribution occurs mainly between man and man, between individual and society, between social groups, between man and animals, man and plants, man and stones, and so on, in Anaximander and Heraclitus it occurs among the physical elements and the heavenly bodies. Instead of natural objects entering as it were into human society, nature, the cosmos,

is conceived as being itself a sort of society. For Heraclitus it is a system which "no one of gods or men has made". (The necessity of events is not, as Kelsen asserts (p. 238), "the inviolable will of a deity", in any ordinary sense of "deity": compare fragment 65 (Bywater) "The wise is one only. It is unwilling and willing to be called by the name of Zeus."). Normative laws and social relations are still used in the account of nature, but now as an analogy. Thus the separation of nature from society had already been made, and the way was prepared for the sophists, using the knowledge of the variation and violability of social customs, to distinguish between convention and nature, norms and scientific laws. But in so doing they went too far when they denied that society exists by nature at all. The correct view is not so very different from that of Heraclitus, that the city and the cosmos are different but in many ways analogous systems (though, of course, related, since the one includes the other). Further important differences could be shown between these views and those of the Pythagoreans and the Orphics, of Aeschylus and Sophocles and Euripides, and so on. Though they are working with the notions of justice and retribution, the different thinkers are posing and solving problems, and arguing with each other: it is misleading to treat them all as holding the same view that "the universal law (is) the law of retribution" (p. 245).

It is true that the great merit of the atomists is that they "consistently eliminated all theological elements from their interpretation of nature". But they did not discover mechanical causation, as Kelsen's account might suggest. Since Thales one of the main trends in Ionian philosophy had been the attempt to explain events mechanically. Thales' explanation of the Nile floods, recorded by Herodotus (Book II, Chapter 20), is a clear example of the extension of this treatment to what would previously have been a sphere of divine control, and Herodotus' own criticism of the theory is to this day a model of scientific method in the examination of hypotheses (see Cohen and Nagel, *Logic and Scientific Method*, abridged edition, Chapter VI). Yet Herodotus was

an elder contemporary of Leucippus and may never have heard of atomism: his account of the alternate acts of injustice inflicted on each other by Asia and Europe (Book I, Chapters 1 to 5) shows an affinity with Anaximander.

Despite such defects as these, Kelsen's thesis is interesting and important, and the evidence he presents in support of it is formidable in quantity, though insufficiently analysed. Perhaps "From Retribution to Causality" would have been a more appropriate title, for the definitions of society and nature, given above, cannot really be sustained in use. We have had to distinguish between nature and society on other grounds throughout this discussion, and we shall have to do so even when normative thinking is finally abolished.

The style in which the book is written is in general clearer than that of most modern sociological works, though occasionally one finds such an Americanism as "It is an explanation merely in the sense of a normative justification legitimatizing personal behaviour" (p. 5). There are a fair number of mistakes in English usage, but none that make the meaning obscure.

JOHN MACKIE.

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TWENTIETH CENTURY PHILOSOPHY, ed. by D. D. Runes. The Philosophical Library, New York, 1943. Price \$5. Pp. 371.

TWENTIETH CENTURY PHILOSOPHY is a collection of essays which differ notably, not only in merit but also in purpose. The volume appears to have two objects; in Part I to provide a general survey of the various fields of philosophy, in Part II to give an account of the principal contemporary philosophical movements. These objects neither the editor (in his choice of articles for reprinting) nor the freshly-commissioned contributors seem to have kept consistently in mind.

Thus, whereas Urban's essay on "Axiology" is a candid historical survey, Boodin on "The Philosophy of History" is merely dithyrambic (with no reference to Croce, but much concern with "cosmic urges") and Pound and Whitehead

attempt no more than a statement of their personal position in their (reprinted) essays on "Philosophy of Law" and "Philosophy of Life". Some of the articles, in fact, are encyclopædic surveys; others are critical commentary; others are simple confessions of faith.

And there are surprising gaps. Russell's (reprinted) "Philosophy of the Twentieth Century" stands as the sole representative of contemporary British philosophy; Italian and French philosophy (except in so far as it is covered by Maritain's unilluminating essay on "The Humanism of St. Thomas Aquinas") is entirely neglected. No doubt war-time conditions are partly to blame; but it is apparent also that the German-American philosophical alliance has survived the decay of Hegelianism. Positivism and pragmatism, whether as Saviour or Satan, are the recurrent themes; and "Personalism" and "Transcendental Absolutism" loom larger in the trans-Atlantic air than Cambridge analysis or the philosophical systems of Alexander and McTaggart.

It is, then, as an account of American philosophy—including as "Americans" expatriate phenomenologists and positivists—that this volume must be read; Chang's careful and detailed essay on "Philosophies of China" and Russell's essay being the only notable exceptions. (Ewing on "Kantianism" is not at his best; his remarks on Kant himself are to the point, but his attempt to estimate Kant's influence is not sufficiently particularised to be of any real use.)

McIntague (reprinted) on "American Realism", a useful account of what the Realists set out to do and the rocks on which they foundered, Dewey (reprinted) on "American Pragmatism", Feigl on "Logical Empiricism" (with a particularly useful historical note), Urban on "Axiology" are the best of the encyclopædic articles (in each case, of course, the essay is favourably-toned). Hoenigswald on "Hegelianism" has much of his master's obscurity, but his emphasis on the variety of ways in which Hegel inspired positive enquiries is a useful corrective to the contemporary depreciation of Hegel and all



he stands for. "Phenomenology", as described by Farber, is no less obscure; this essay will not, one is afraid, make it no longer possible to say that "phenomenology is the least understood of current philosophical tendencies" (p. 367). What the English reader naturally finds bewildering is the apparent disregard of all realist criticisms of subjectivism; he is puzzled not so much by what is being said, but that it should be said—and wonders whether he has misunderstood. Flewelling expounds "Personalism" and, in the process, makes some startling innovations in the history of philosophy. ("Heraclitus affirmed mind as the fundamental reality because it alone had the power to differentiate itself from the objective world and from its own experience"; p. 327.)

Of the more critical essays, Russell's criticism of Hegel and Bergson in the interests of a "pluralistic realism", and Everett Hall's "Metaphysics", with its critical exposition of "actionist" and positivist rejections of metaphysics, are by far the most able. Tuft on "Ethics" leads one again to despair of that unfortunate subject. He is able to finish off ethics in a few pages by assuming as "moral facts" whatever is really disputable, and can then set about lambasting Communists and Nazis with the comfortable feeling that everything is well in hand on the ethical front.

The personal statements include the reprinted essays of Pound on "The Philosophy of Law", Whitehead on the "Philosophy of Life", Santayana on "Transcendental Abolutism". And one cannot forbear mention of Winn's "Philosophical Naturalism", on account of its value to the collector of platitudes.

On the whole, this is not an inspiring volume; but individual essays in it are distinctly useful, even though no higher claim can be made for them.

J. A. PASSMORE.

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Need Ontology?: Roy Wood Sellars. No. 26, December 21. The Relations of Science and Democracy: Abraham Edel. Vol. XLII. No. 3, February 1, 1945. Generality and Singularity in Historical Judgment: Albert Hofstadter. Science is a Stern God: Harold H. Punke. No. 4, February 15. Pepper's *World Hypotheses*: Raymond Hoekstra. Reply to Professor Hoekstra: Stephen C. Pepper. No. 5, March 1. Quality and Form in the Esthetic Object: Sidney Zink. No. 6, March 15. Value and Interest: Otis Lee. No. 7, March 29. History and the Historian: Paul Weiss. Intrinsic, Instrumental, and Creative Value: Henry Nelson Wieman. No. 8, April 13. Value Judgments and the Social Sciences: Emile Benoit-Smullyan. Integrity as a Standard of Valuation: James Gutmann. No. 9, April 26. A Terminology for Knowings and Knowns: John Dewey and Arthur F. Bentley. No. 10, May 10. Critique of Naturalism: W. H. Sheldon. Retributive and Distributive Justice: Lucius Garvin. No. 11, May 24, *Esse est Percipi*, with Particular Reference to Number: De Witt H. Parker. No. 12, June 7. The First Mystery of Consciousness: Wm. Pepperell Montague. The Attack on the Historical Method: Morton G. White. No. 13, June 21. Definitions of Value and the Moral Ideal: Henry David Aiken. The Ego-Alter Dialectic and the Conscience: H. Richard Niebuhr. No. 14, July 5. Peirce's Use of Kant: James Feibleman. A Comment on Peirce's "Tychism": Frances Murphy Hamblin. Peirce's Sixty-Six Signs: Paul Weiss and Arthur Burks. No. 15, July 19. The Word Became Flesh: H. A. Overstreet. No. 16, August 2. The Poetic Organism: Sidney Zink. No. 17, August 16. A New Method of Presentation of the Theory of the Syllogism: Max Black. No. 18, August 30. A Discussion of the Theory of International Relations: John Dewey, T. V. Smith, Arthur O. Lovejoy, Joseph P. Chamberlain, William Ernest Hocking, E. A. Burt, Glenn R. Morrow, Sidney Hook, Jerome Nathanson. No. 19, September 13. Right Acts and Moral Actions: S. S. S. Browne. No. 20, September 27. Vested Interests and Civilisation: Harold H. Punke. No. 21, October 11. The Evaluation of Ideals: Abraham Edel. Realism: Donald Williams. No. 22, October 25. Mr. Russell and Dogmatism: Raphael Demos. No. 23, November 8. Some Reflections on the Use of Language in the Natural Sciences: Ernest Nagel. No. 24, November 22. Postulations: John Dewey and Arthur F. Bentley. No. 25, December 6. Polarity and Progress: Melvin Rader. The Epistemology of C. A. Strong: Neal W. Klausner. No. 26, December 20. Ethical Subject-Matter and Language: John Dewey. Vol. XLIII. No. 1, January 3, 1946. The Technical Factor in Art: Arnold Isenberg. No. 2, January 17. The Descriptive Definition: Stephen C. Pepper. Reference and Function: George Gentry. No. 3, January 31. Abstracts of Papers to be Read at the Forty-second Annual Meeting of the Eastern Division of the American Philosophical Association. No. 4, February 14. Peirce's Theory of Linguistic Signs, Thought, and

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